4:Grajdanzev--32-34 S-4 (no date) 1942 Formosans-1-5
116, 162, 171, 463, 563

"Even in advanced countries occupational statistics are not precise, and in the colonies they are far less reliable. Nevertheless, if one wants to determine only the general characteristics of the population, occupational statistics for Taiwan reveal something. The following table divides the population into such broad categories as 'occupied in agriculture and forestry', 'occupied in industry and mining', etc. The division is given for the whole population and also, for the Chinese and the Japanese separately. The year taken is 1930, because no later figures are available, but it will be shown later that no great changes have taken place since that time. Unlike Korea, where the members of the family who do not take part in work are included in the same occupational group as that of the head of the family, in Taiwan they are registered as having 'no occupation'.

Occupational Statistics For Taiwan, 1930
(in thousands)

	Agriculture and forestry	Fishing	Industry and mining	Trade	Communication	Public serv. & prof.	Others	No Occup.	Total
Japanese	4.4	1.6	15.2	18.1	9.1	37.6	4.5	137.7	228.2
Natives	1,191.7	26.8	144.2	151.0	49.8	37.4	67.6	2,645.1	4,313.6
Total (incl. others)*	1,197.1	28.6	173.6	178.3	63.1	76.0	73.4	2,802.4	4,592.5

* Includes 'foreigners', chiefly Chinese from China proper.

4: Gradjdanzev--32-34 S-4 (no date) 1942 Formosans-2
116, 162, 171, 463, 563

The same table is given below in percentages, taking the number of those occupied as 100 For the sake of comparison corresponding figures for Japan proper for the same year are given: [33]

Occupational Distribution Of Taiwan
(percentages, 1930)

	Agric. and forestry	Fishing	Industry and mining	Trade	Communications	Public serv. & prof.	Others	Total occupied
Taiwan								
Japanese	4.8	1.8	16.8	20.0	10.1	41.5	5.0	100.0
Natives	71.4	1.6	8.6	9.0	3.0	2.2	4.1	100.0
All, incl. others	67.0	1.6	9.7	10.0	3.5	4.2	4.1	100.0
Japan proper (1930)	47.7	1.8	20.0	15.1	3.7	6.9	4.5	100.0

In a condensed form this table indicates to us the most important problems of Taiwan. Taking the native population, we see that almost three-fourths are occupied in agriculture. Forestry as a rule serves only as subsidiary occupation to agriculture. At the same time only 8.6 per cent are occupied in industry and mining, and this also includes those occupied in domestic industries where the productivity of labor is almost as low as in Chinese agriculture. At the same time there are more persons occupied in trade in the broad sense than in industry (9.0 and 8.6 per cent respectively) while only three

per cent are occupied in transportation. This illustrates the low level of economic development of the country. In this respect comparison with Japan is interesting. Only a few decades ago Japan herself was at about the same stage of economic development as China. Now, we see that less than half of her population are engaged in agriculture and 20 per cent in industry and mining.

The occupational statistics prove once more that there are two distinct groups in the population; 41.5 per cent of the Japanese, as compared with only 2.2 per cent for the natives, are occupied in public service and the professions, i.e. they form the backbone of the administrative services of the island. We shall see later that only the lowest positions in these services are open to the Chinese. Almost 17 per cent of the Japanese are occupied in industry, and they occupy all the key positions. About 18 per cent of them are occupied in trade and 10 per cent in communications. Comparison with figures for 1905 indicates furthermore that no substantial changes have taken place since then. [34]

	Agric. and forestry	Industry and mining	Commerce and communic.	Public service	Other occupations
Chinese					
1905	75.5	6.1	8.2	1.4	8.8
1930	73.0	8.6	12.2	2.2	4.1

	Agric. and forestry	Industry and mining	Commerce and communic.	Public service	Other occupations
Japanese					
1905	*	23.5	32.5	37.8	6.2
1930	*	16.8	30.1	41.5	11.6

* Included in 'other occupations.'

More than 75 per cent of the Chinese were occupied in agriculture in 1905, and 73 per cent in 1930; there was a slight rise in the number occupied in industry—from 6.1 to 8.6—and a more pronounced increase of those occupied in trade. As is well known, trade is the refuge of the unemployed and under-employed and its rapid growth as compared with other professions is hardly a sign of strength.

In twenty-five years the number of Japanese occupied in government administration rose from 37.8 per cent to 41.5 per cent. The fall in the percentage of those occupied in industry may be due to the fact that in the period from 1896 to 1905 very many Japanese were obsessed with the idea of making money in Taiwan in the shortest possible time. Since then the potentialities of the island have become better known, large business organizations have squeezed out the independent ventures. In any case these figures illustrating the changes in Taiwan in twenty-five years do not show that with the passing of time the occupational composition of the Chinese and of the Japanese of the island tends to become similar. If data were available for each occupation showing how many Japanese

and how many Chinese are in important executive positions and how many in subordinate positions, the gap would appear much wider. Unfortunately, direct data are not available, but we shall see later that there is no indication that the division is becoming less sharp."

4:Grajdanzev--73-74 S-4 (no date) 1942 Formosans-1-3
116, 162, 463, 472

"Industry has expanded relatively rapidly, but even in 1935 there were only 67,255 workers in industrial enterprises employing more than four workers each or having a prime-mover. Nevertheless, according to the current official statistics which follow, 'agricultural population' of Taiwan formed only about fifty per cent of the population in 1938.

Changes in Agricultural Population in Taiwan

	1935	1937	1938
Total families (1,000)	897.6	...	...
Families occupied in agriculture (1,000)	419.9	427.4	...
Agricultural families as % of total	46.7	...	...
Total population (1,000)	5,212.4	5,609.0	5,747.0
'Agricultural population' (1,000)	2,790.3	2,880.4	2,896.4
'Agricultural population' as % of total	53.6	51.3	50.4

As early as 1935, according to this table, the families occupied in agriculture made up only 46.7 per cent of the total, while the agricultural population made up 56.3 per cent in that year and only 50.4 per cent in 1938. According to the census statistics, in the 25 years between 1905 and 1930 the Chinese population occupied in agriculture fell

only from 75.5 per cent to 73 per cent of the total Chinese population, while the current statistics show a fall of 3.2 per cent (of the total population) in three years. Even before 1935 the number of [74] agricultural families showed a definite lag as compared with the growth of total population, as may be seen from the following table.

Comparison of Changes in Total Population and in Agricultural Families in Taiwan*

Year	Total population (1,000)	Index of growth	Year	Agricultural families (1,000)	Index of growth
1905	3,039.8	100	1903	383.1	100
1925	3,993.4	131	1924	390.2	102
1930	4,592.5	151	1929	407.7	106
1935	5,212.4	171	1935	419.9	109
1937	5,609.0	185	1937	427.4	111
1938	5,747.0	189	1938	424.5	111

*The years given for each category do not always coincide because of absence of data: we have taken the years for which the information could be found.

In thirty-three years the population of Taiwan increased by eighty-nine per cent while on the basis of these figures the number of families engaged in agriculture, increased

by only eleven per cent. Such changes are of course quite possible. The agricultural population might send its 'surplus' to cities, where they may find employment in industry, commerce, public services and so on. But as was mentioned already, the number of workers in industry was very small in 1935 and there is no indication that it has increased considerably in the last three or four years. The difference between sixty-five and fifty per cent is, in absolute numbers, about 900,000 persons, or between 500,000 and 550,000 gainfully employed persons--quite a considerable figure for even a great country."

"This predominance of the food industry, or, in other words, of the processing of agricultural products, may also be illustrated by the following figures of workers by industries in Taiwan for 1937 covering enterprises with five and more workers, (1) or with a prime-

1. Government enterprises are excluded.

mover. [94]

	Absolute figures	Per cent of total
Textile	3,951	4.5
Metals	2,884	3.3
Machinery	4,214	4.8
Ceramics	10,528	12.1
Chemical	4,988	5.7
Lumber	2,674	3.1
Printing	3,027	3.5
Food industry	48,615	55.7
Other	6,363	7.3
Total	87,244	100.0

Source: Dainippon teikoku nenkan, 1939.

4:Grajdanzev--93-94 S-4 (no date) 1942 Formosans-2
116, 171, 433, 463

"The total number of workers in 1937 was only 87,244, while in Japan in the same year it was 2,936,512, or 34 times as many, though the population of the latter in the same year was only 12.7 times as great as Taiwan's. The number of workers in the food industry made up 55.7 per cent of the total, a smaller proportion than that based on the gross value of production, while the proportion of ceramics in the total was unexpectedly high (12.1 per cent) and that of the chemical industry only 5.7 per cent. The divergence may be explained (1) by special conditions in the industries concerned (e.g. the relation between gross value and net value is different in different industries); (2) by the prominence of modern or of primitive types of industrial enterprises—those in ceramics, printing, bookbinding and the lumber industry, for example, are chiefly small enterprises without machinery where productivity per worker is small; but in the food industry as will be shown later on, and in the chemical industry new and efficient enterprises predominate; (3) by the monopolistic position in the market of certain industries, which permits them to exploit the consumers."

4:Grajdanzev--110 S-4 (no date) 1942 Formosans
116, 315, 463

"There are no recent data on the number of workers occupied in mining but in 1930, according to the census of population, the number was 24,000 persons or about 1.4 per cent of the active population of the island."

4:Grajdanzev--110-111 S-4 (no date) 1942 Formosans-1-3
116, 463, 471, 563, 655, 177.47 Japan
636.47

"Our analysis of industry and mining must not be limited to a survey of present conditions and the plans of the government, etc. Properly speaking it should only begin here. The population of Taiwan is about five per cent Japanese and about ninety-five per cent Chinese and aborigines. In order to evaluate the place of these two groups in industry and mining we should know wage levels and working conditions as well as the all-important question of who are the entrepreneurs and who the wage earners. Unfortunately, some of these questions cannot be answered because of the absence of information.

The latest available report concerning the nationality of capital in Taiwan's companies refers to the years 1929.

Distribution of Corporate Capital in Taiwan by Nationality in 1929
(1,000 yen)

	Japanese	Chinese	Other*	Total
Agriculture	4,434	4,962	4	9,399
Industry	180,497	16,786	1,658	198,941
Commerce	23,128	28,082	2,033	53,242
Communications	3,186	2,571	25	5,781
Fisheries	2,258	1,190	20	3,467

Distribution of Corporate Capital in Taiwan by Nationality in 1929 [Cont.]
(1,000 yen)

	Japanese	Chinese	Other*	Total
Mining	12,243	3,441	1,422	17,107
Total	225,745	57,033	5,161	287,939

* Chiefly Chinese from the mainland, citizens of the Chinese Republic.

The share of the Japanese was therefore 90.7 per cent in industry and 71.6 per cent in mining, while the corresponding shares for the Chinese were 8.5 per cent and 20.1 per cent. It is true that these figures do not include individual enterprises, which are chiefly Chinese, but it is quite evident that their inclusion would not greatly change the picture because the average capital of such enterprises is very small. On the other [111] hand this table does not include government enterprises which should be considered for all practical purposes as Japanese enterprises (the managerial staff is Japanese and the profits may be transferred to Japan at any time), and the capital of these government enterprises is huge. As is seen from the table, the capital of all corporations was about ¥288 million in 1929, yet in the same year the capital of the state railways alone was ¥122 million. Beside railways the government has many enterprises of all kinds. Since 1929 the situation has further changed to the disadvantage of the Chinese group for in the

last few years, as was shown above, huge new companies have been established and the capital of old ones increased. The new companies are Japanese. In 1929, for example, the capital of the Japanese companies occupied in the fisheries was ¥2,258,000; in 1939 two Japanese companies with headquarters in Japan proper, whose capital is ¥65,500,000 were operating in Taiwan. Of course, only a part of this capital is sunk in their Taiwan enterprises, but it is clear that the situation in 1939, in this as well as in many other respects, is less favorable to the Chinese than it was ten years before.

The same thing has occurred in mining, where the total capital is now ¥46.6 million, instead of ¥17.1 million as in 1929. The increase is due to the activities of the Japanese Koyo Kogyo, Taiwan Kogyo, and Keelung Tanko corporations."

4:Grajdanzev--111-112 S-4 (no date) 1942 Formosans
116, 463, 471, 563, 477

"A similar expansion [similar to that in mining--analyst] has taken place in industry, where all large new enterprises are owned by Japanese who make up only five per cent of the population, but now own at least ninety-five per cent of the capital in Taiwan's industry and more than ninety per cent of the capital in mining. But if one takes into consideration the fact that the Japanese enterprises are modern, while those of the Chinese are small and have more primitive equipment, (1) it becomes clear that the share

1. Compare the data on sugar mills given above.

of the Japanese enterprises in production is even greater than comparison of the respective holdings would indicate. Furthermore, the shares of corporations in Taiwan are not subject to free purchase and sale. These are monopolistic [112] organizations, and shares in them are not offered on the open market but are held by the big corporations of Japan."

4:Grajdanzev--1I3 1 S-4 (no date) 1942 Formosans
116, 463, 471, 563, 177.47 Japan
636.47

"Our first question is now answered: the Chinese as a group receive very little from Taiwan's industry and mining in the form of interest on capital or entrepreneurs' profits. Any advantages which they may derive from these industries arise then chiefly from their position as workers. Let us see now what they receive in this capacity. In 1936, out of 81,589 workers occupied in industrial enterprises with five or more workers or having a prime-mover, 76,251 (93.5 per cent) were Chinese—almost the same percentage as in the population of Taiwan. The remaining 6.5 per cent were chiefly Japanese."

4:Grajdanzev--119-120 S-4 (no date) 1942 Formosans
116, 463, 497

"Besides these railroads there are in Taiwan special roads for transporting sugar cane from the fields to the mills, the total [120] length of which in 1938 was 2,098 km. There is also a unique system of communication on the island, 'light railways', or very narrow tracks of light rails on which run 'push-cars' propelled from behind by Chinese coolies. They are used for both passengers and freight, but their importance is declining: even at Taiwanese wages a coolie cannot compete successfully with a locomotive.

Taiwan's 'Light Railways'

	1929	1938
Length of roads (km.)	1,022	806
Cars	5,645	3,545
Passengers carried (1,000)	5,251	2,002
Goods (1,000 tons)	803	503
Total receipts (1,000 yen)	2,419	1,153 "

15: U.S. Navy--31 [2] (no date) 1944 Formosans
116, 563, 262, 463, 457

"The Japanese diet is simple. Rice is the staple with a garnish of pickle or fish and bean paste soup. Most Japanese are managers of large enterprises, government officials or wholesale businessmen, settled in and around the large cities. They have created a large number of hotspring and recreational resorts. There are few Japanese of great wealth with permanently established residences in Taiwan, for the work of the majority is the creation and transfer of wealth from Taiwan to absentee proprietors in Japan Proper."

15: U.S. Navy--33 [4] (no date) 1944 Formosans
116, 563, 463, 465, 177.46 Japanese
636.46

"Formosan-Chinese furnish almost all labor. Japanese are generally employed as foremen or skilled labor, or in particularly vital operations. For instance, they provide the personnel on the moving stock of the Government Railway system. This accounts for the difference in wage scales whereby the Japanese laborer receives from 80 to 150 percent more than Formosan-Chinese who do the same work. A Japanese tailor, for instance, at one time received two yen a day as against 1.20 yen per day for a Formosan-Chinese; a worker in a pineapple cannery 1.50 as against the Formosan-Chinese wage of 70 sen."

42: Schetelig--388 T-2 (no date) 1868 Formosans
116, 162, 186, 463, 609

The population of Sawo, which is cut off from all communication by land with the rest of the island (except with the Caponlan Plain), is consequently made up of the dregs of the Chinese population. Since agriculture is impossible, they belong to a genus of seaman such as exists only in China, for on occasion they can transform themselves into pirates, shore robbers, camphor wood thieves or mandarin's soldiers, as required. Sawo is a place with an evil reputation even among the Chinese....Shortly after we had arrived camphor agents landed and, although they were extremely polite to us on the surface, they nevertheless looked at us suspiciously for they thought that their secret trade might be unfavorably influenced by us. These persons then stirred up the inhabitants against us and spread the rumor that we were traveling in the interests of a foreign government, the Prussian Government, and they hampered us in all our movements. The web of intrigue that was thrown around us was extremely finely spun, and every day there were new troubles and new affronts; for the Chinese, when he is evil, observes the principle that evil must be profitable to him, or it is not worth the trouble. Finally, after they had tried in vain to starve us out, for we were well supplied, we had to forego water transportation. The boats and junks were hidden from us and we were compelled to travel by land over the ridge of hills to the north to the plain of Caponlan, since we could not leave behind the instruments, etc. Fortunately there were five of us and we were all armed, for among these rogues a single man would have perhaps had a hard time.

D. Occupational Composition

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In 1953, of 5,400,000 people more than twelve years of age, 1,800,000 were engaged in agriculture, 23,000 were in industry, and 460,000 were students. There were 2,000,000 people without formal occupation, but most of them (1,700,000) were housewives. Agriculture is the most predominant occupation although the proportion of agricultural workers to the total working population has declined gradually during the last forty years. From 1915 to 1940, the proportion of farmers in relation to the total working population decreased from 70.1 per cent to 62.4 per cent;[11] the percentage for 1953 was 53. For detailed breakdown, see Table 4.

11. T'ai-wan-sheng Wu-shih-i-nien-lai T'ung-chi T'i-yao [Statistical Summary of Taiwan for the Past Fifty-one Years], Taipei, Provincial Government of Taiwan, 1946, pp. 130-38; See also Results of the Seventh Population Census of Taiwan, 1940, Taipei, 1953, pp. 68-69.

45:Stanford U. S-4, 5 1956 AD 1 Formosa AD2

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Table 4. Population by Occupation */

	Population	Male	Female
Over 12 yrs. of age	5,422,044	2,777,938	2,644,106
Agriculture	1,811,767	1,277,139	534,628
Mining	36,659	32,786	3,873
Industry	232,873	207,752	26,121
Commerce	251,230	231,866	19,364
Transportation	68,196	65,480	2,716
Public Service	119,728	109,489	10,239
Professionals	74,644	57,925	16,729
Service Industry	225,969	168,181	57,788
No Occupation **/	2,005,777	219,851	1,785,886
Student	462,469	291,971	170,498
Military Service ×/	58,967	57,563	1,404
Others	72,805	57,935	14,870
Under 12 yrs. of age	3,015,972	1,548,700	1,467,202
Current total Y/	8,438,016	4,326,708	4,111,308

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463 scarcity of employment has resulted in the increase in the number of "self-made" jobs, such as the keeping of small, temporary streetside shops and stands, peddling, "household industries" of various kinds, cart-pulling, and pedicab-operating. Marginal self-employment is the chief source of income for approximately one-fifth of the males 15-50 years of age in the seventeen areas surveyed in 1954 by the China Mission of the American Mutual Security Agency and a group from National Taiwan University. A large proportion of those marginally self-employed would shift to regular industrial jobs if such jobs became available.[4]

369 Because of under-employment and the
464 prevailing low wage-scale, women and children often take up various kinds of work in order to supplement family incomes. Many urban households augment their income by raising hogs or fowl. Overcrowding in urban areas, the increase in the number of peddlers, streetside stands, and the feeding of hogs and fowl in crowded districts create a very serious health and sanitation problem.

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3. (continued) today far exceeds the number reported under Japanese rule. See the section on Criminal Codes and Procedures in the chapter on Law and Order.

4. Raper, op. cit., p. 5.

III. INDUSTRIAL LABOR

464 The Labor Force. The Economic Stabilization Board estimates that the current industrial labor force engaged in all types of manufacturing and mining is in the neighborhood of 0.3 millions.[19] It is reported that nearly 20 per cent of the workers are women; one per cent, child workers.[20] The same report states that in 1951 the average age of male workers in public enterprises was 31 and that of female workers 24. If all the government enterprises were considered, 25 per cent were within the age bracket of 21 to 25 years.[21]

463 Composition of the Labor Force. Industrial workers are heavily concentrated in the Taipei, Tainan, and Kaohsiung areas on account of the existence of coal mines and textile factories in the north and of chemical and machinery manufacturing factories in the south. The distribution of workers according to the county (hsien) follows:

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19. Ibid., p. 33.

20. Free China Labor League, T'ai-wan Lao-kung Yün-tung Kai-k'uang [General Condition of the Labor Movement in Taiwan], Taipei, 1952, pp. 7-8.

21. Ibid.

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45:Stanford U. S-4, 5 1956 AD1 Formosa
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NUMBER OF PERSONS ENGAGED IN MANUFACTURING AND MINING AS OF DECEMBER 1951 IN FORMOSA*

Hsien	Manufacturing	Mining
Taipei (incl. Yangmingshan Adm)	67,963	40,686
Yi-lan	5,449	-
Tao-yuan	5,800	941
Hsin-chu	8,382	2,363
Miao-li	8,797	4,465
Tai-chung	17,880	66
Nan-tou	3,148	-
Chang-hua	8,909	-
Yun-lin	6,568	-
Chia-yi	11,743	-
Tai-nan	24,027	256
Kaohsiung	28,109	-
Tai-tung	2,615	-
Hua-lien	1,117	39
Peng-hu (Pescadores)	1,343	-
Total	206,740	49,756

45:Stanford U. S-4, 5 1956 ADI Formosa
AD2
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* Taiwan Provincial Government, The Structure of the Taiwan Economy, Taipei, 1953.

463 In terms of industrial divisions, workers in the food-processing industry constituted in 1951 about 30 per cent of the total number of workers. The following table shows the distribution of workers by industries and by sex:

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NUMBER OF EMPLOYEES (BY INDUSTRY AND SEX) IN GOVERNMENT ENTERPRISES*

Industry	(March 1, 1952) Total	Male	Female	(December 31, 1951) Total	Male	Female
Textile	7,816	2,399	5,417	28,873	8,409	20,464
Metal	3,259	3,050	209	3,626	3,257	351
Machine & Tools	7,440	7,095	345	7,121	6,753	368
Kiln	4,843	3,930	913	10,390	7,482	2,908
Chemical	17,881	14,465	3,416	9,440	6,558	2,882
Wooden#	6,596	6,158	438	4,377	3,934	443
Printing	2,014	1,472	542	1,889	1,625	264
Food Processing	29,519	25,741	3,838	20,067	15,493	4,574
Gas & Electricity	5,019	4,810	209	-	-	-
Others	252	157	95	3,393	1,484	1,909
Total	84,699	69,277	15,422	89,176	55,013	34,158

45:Stanford U, S-4, 5 1956 ADI Formosa
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* Taiwan Provincial Government, Department of Reconstruction as quoted by L. R. Smith and W. R. Etter, Labor in Taiwan, Taipei, MSA/MC, 1953.

This term is used in the original source and presumably includes logging and lumber workers.

45:Stanford U. S-4, 5 1956 ADI Formosa
~~ADI~~ RD2

463 According to a 1952 survey of 17 urban areas, industrial and government employees and mining workers accounted for 45 per cent of all gainfully employed workers over 12 years of age. However, for the province as a whole the ratio was only 18 per cent. The breakdown of occupation distribution is shown below:

PERCENTAGE OCCUPATIONAL DISTRIBUTION OF WORKERS*

Occupation	Whole Province	Seventeen Cities and Towns
Total	100	100
Industry	8	21
Commerce	9	21
Government employees	4	12
Transportation and Communications	2	7
Professionals	2	5
Mining	1	3
Agriculture	62	20
Domestic service	8	8
Others	3	3

* A. F. Raper and others, Urban and Industrial Taiwan, Taipei, Foreign Operations Administration and National Taiwan University, 1954.

463 Marginal Self-employment. Due to the over-supply of labor in urban areas, many people have created employment for themselves by engaging in the so-called "marginal self-employment." It is "marginal" in the sense that the manpower is utilized less than its full and productive use. In the capital city of Taipei, 34,500 heads of households, supporting over one-fifth of the city's population, were engaged in the following types of employment in 1953:

NUMBER OF SELF-EMPLOYED PERSONS IN TAIPEI, 1953*

Occupations	Number
Small shopkeepers and peddlers	20,000
Pedicab operators	9,000
Freight-cart pullers	2,500
Household Industries	2,000
Ox-cart drivers	350
Truck-hoppers	250
Others	250
Total	34,350

* A. F. Raper and others, op. cit.

Small retailers and peddlers have increased in recent years. The majority of small retailers

463 sell towels, shirts, soap, food, etc., at roadside stands. Household industries such as cake baking, handicrafts, etc., are also very common. Truck-hopping is an entirely new occupation in Formosa. The truck-hoppers are young and husky persons who hop on the moving trucks and start bargaining for unloading jobs as soon as the trucks reach their places of unloading.

IV. WAGE LEVELS AND WORKING CONDITIONS

465 The Wage Level. Government statistics
434 shows improvement of the wage level in recent years. During the years 1949-52, the index of wages and salaries rose faster than the retail price index:

45-Stanford U. S-4, 5 1956 AD1 Formosa
AD1

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The Industrial Workers' Outlook. The outlook of industrial workers is determined by the low wages, high prices, and pressure of population on the employment situation. From surveys made by the FOA among coal miners (120 households) at Hsu-ti, dock workers (450 households) in Keelung, salt workers at Putai (132 households), and fishermen (105 households) at Kaohsiung, Suao, and Tainan during 1954, it was learned that a high percentage of workers felt that current conditions were worse than in 1937. The following tabular presentation of the survey results may be examined:

45:Stanford U. S-4, 5 1956 ADI Formosa RD2

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CONSENSUS OF OPINION ON CONDITIONS IN 1954 COMPARED TO CONDITIONS IN 1937*
(in per cent)

	Better	Worse	About the same	No Answer	
Coal Miners (120 households)	12	29	32	27	100
Dock workers (450 householders)	8	32	30	30	100
Salt workers (132 households)	11	52	28	5	100
Fishermen (105 households)	34	34	29	3	100

* Compiled from Foreign Operations Administration, Mutual Security Mission to China, unpublished pamphlets.

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Reasons such as higher price levels, low real wages, and unemployment were given by those who thought that the situation had deteriorated. For the "better" answers, more freedom and more United States aid were mentioned as reasons.[25]

When asked whether in their opinion conditions in the next ten years were like to be better or worse, more than three-fourths of the coal miners thought the situation would be about the same, while 14 per cent indicated that it would be worse. To the same question, 26 per cent of the dock workers answered "better" and two per cent, "worse," while 67 per cent gave no answer. Twenty-one per cent of the Putai salt workers said "worse," and 16 per cent "better"; and 62 per cent gave no answer.

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25. It may be noted that the workers interviewed may have said "better" with the expectation of receiving increased United States aid. Likewise, they may have said "worse" with the hope that current conditions may be improved. These answers are by no means conclusive. Many of the workers of 1954 were probably very young in 1937, and it is difficult to say whether they would recollect correctly after a lapse of seventeen years, a long war, and the change of government.

463 208 The reason for the "worse" answers were found to be overpopulation, more competition, more unemployment, and low income. More United States aid, possible reconquest of the Mainland, and more employment were given as reasons why conditions might improve.

V. LABOR ORGANIZATIONS

467 The Limited Role of Trade Unions. Although Article 5 of the Labor Union Law (revised) of January 7, 1949, states: "The functions of a labor union are as follows: (A) to conclude, revise, or abolish any agreement or contract on behalf of the members...," the trade unions in Formosa function principally as a medium of political education and undertake limited welfare activities on behalf of their members.

During the Japanese occupation unionization was banned by the Government-General. At that time most of the workers were not sufficiently educated or aggressive enough to form unions. Despite the National Government's attempts to encourage unionization, in view of the existing emergency conditions, trade unions are not permitted to exercise their bargaining power. The government has undertaken to train union officials. At the same time, government promotional and

this growth was due to the natural increase of the Chinese people. Density of settlement increased to 376 per square mile of total land area in 1935, and to 424 in 1940. This was a high density in a country where 70 per cent of all gainfully occupied men were in agriculture and cultivated land was limited to the river valleys of the northern tip and the fertile areas facing China. Industry was limited largely to the processing and transportation of agricultural products until the war preparations of the Japanese induced rapid industrialization and urbanization in the middle and the late thirties. 161 241 177

In this economic development, Japan's main interest lay in agricultural commodities which enabled her to be less dependent on sources outside of the Empire. The Japanese occupied the major administrative, technical and managerial positions while the Chinese comprised the farmers and the unskilled laborers. The latter were maintained in relative isolation from the outside world with minimum possibilities for economic or cultural advancement. However, an increasing proportion of the children of the Island received elementary education and some even received a secondary education. A select few attended the Imperial University in Taiwan and went on to study in Japan. This cultural leaven was Japanese-oriented to a degree far beyond linguistic adaptation. In fact, the Japanization that had been in process of slow evolution since the initial conquest became a firm policy of forced cultural assimilation by the late thirties. 463 563 177 871

Here was a classical experiment in the potentiality of the Chinese peasant to reproduce his numbers under favorable conditions. Famines were eliminated and food available for subsistence increased in amount. Epidemics were controlled and the effects of endemic diseases were mitigated. All forces conspired to preserve and to sustain life in so far as possible with known technologies and at minimum cost. The same economic and political ideology insured the continuation of high birth rates. The familial values which had insured survival throughout the millenia in the rice lands of the Mainland were preserved in the isolated peasant villages of Taiwan.

THE DEATH RATE

The demographic paradox of colonialism appeared early in Taiwan. A combination of forces produced a decline in the death rate without either a concomitant or a delayed decline in the birth rate. Recorded death rates 165 563

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433 241 have always supplied a large part of the Taiwanese diet. How well these three basic crops represent the whole of Taiwanese agriculture may be seen from their share in the total recorded value of farm produce (see Fig. 4).[18]

241 621 The spatial arrangement of crops discussed in the previous chapter has an important bearing on the question of persistence in organization of agriculture. Rice fields were found throughout the flat lowland area, overlapping in every civil division with the other types of farming. In its import for the nature of the rural society, this fact overshadows most effects of diversification and rationalization of farming. The types of social system that can give rise to paddy cultivation of rice seem to be uncommonly well equipped to resist change. They are centered around settled family relationships that provide for uninterrupted use of suitable fields over many generations. This is the case throughout most of the paddy-rice areas of Asia, where these conditions resemble what is to be found in Taiwan.[19] Hence, from this stability within farming itself, one should not expect to find that its social setting was greatly different as a result of Japanese occupation.

Changes in Pattern of Employment

463 Farming is so important to Taiwan that it has first been treated separately, with very little reference to its place among other activities. By viewing it in relation to the pursuits of the entire working population, we can take into account the nature of alternative opportunities outside of agriculture.

There would not be much point in looking for possibilities of non-agricultural employment if the economy could not have supported a larger proportion of people in other activities. This is where many agrarian countries have felt the effect of poverty to stand in the way of their industrial progress. From the start of its modern era, Taiwan's peculiar status as a food exporter suggests that food supply was no barrier. Since that time, special diligence in the matter made land and human effort more effective in producing crops. Advancing both of these aspects of productivity implied that at least some movement of people to pursuits outside of agriculture was economically feasible.

[18] These trends, of course, indicate nothing about "well-being" of farmers, since large capital charges (for irrigation, fertilizer, and government administration) were being made against farm incomes.

[19] See Taeuber, Irene B. (1947), pp. 21-43.

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ECONOMIC ACTIVITIES AND SOCIAL CHANGE

It is certain that Taiwan underwent some social changes under the Japanese. The colonial program itself was one, with consequences that were far-reaching. Moreover, the expansion of population and production could not have occurred without further adjustments in social institutions, for in the so-called natural environment men rarely succeed (under the most favorable conditions) in enlarging their works in exact scale. But to have left so much of the old society intact, these changes must have been distributed unevenly through the population; some portions must have been influenced more than others.

In ascertaining the facts of the case, the first step is to see how the working population became involved in new activities. The work of peasant farmers was least affected. Hence one should look for the largest results in alternative fields. The only way for specialization to have progressed very far, in view of what is known of the agricultural economy, was through the spread of employment other than farming.

Fortunately, there is reliable information to show who performed the principal economic activities at certain times. Five census enumerations were conducted with great concern for determining the occupational composition of the population. In four of these, up to 1930, tables were published classifying the people in detail according to occupation and other characteristics, using categories that are nearly if not exactly comparable from year to year.[20] The proportions of all working persons found among various classes of occupations have been assembled from these sources in Table 11. In 1940, the same information was collected and tabulated, but not published with full explanation of procedures; only the one table reproduced here has become available outside of Taiwan.*

Even as early as 1905 not everyone in the island was restricted to agriculture as a means of support. Slightly more than two-thirds of all persons with occupation were so engaged, with a group half as large remaining to be accounted for in other pursuits. These data

[20] Where the classification departed from previous practice, continuity can be preserved in broad groups of occupations by re-allocating occupations in the smaller groupings. Where such re-grouping has been possible, it will be appropriately noted in the text. Later, in cross-tabulations with other characteristics, the broadest categories often must be used as they stand.

* While this book was in press, a collection of tables from the census of 1940 was published in Taiwan. See *Results of the Seventh Population Census of Taiwan, 1940* (Taipei, Provincial Government of Taiwan, Bureau of Accounting and Statistics, March 1953).

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TABLE 11

OCCUPATIONAL COMPOSITION, TOTAL POPULATION OF TAIWAN

Per Cents of All Occupied Persons Reported in Each Occupation,* 1905, 1930, and 1940. All Ethnic Groups, Both Sexes

Occupation†	*1905*	*1930*	*1940*
Agriculture‡	71.2	68.2	64.6
Fishing	2.2	1.8	5.4
Mining	0.5	1.4	1.9
Manufacturing	6.2	8.5	7.6
Commerce	6.7	12.0	10.0
Transportation	2.1	3.0	2.7
Gov't. and Prof.	2.3	4.9	5.1
Other	8.8	0.2	2.7
Total Occupied	100.0	100.0	100.0
Per Cent Occupied	45.8	38.8	37.6

* Persons classified as Domestic Servants have been removed.

† The data used in this table to represent the years 1930 and 1940 are not of precisely the same sort as those showing the occupational distribution of the population in other tables. The scheme for classifying occupations was greatly changed between the censuses of 1930 and 1940; as a result, the only basis for comparison between these two dates is the classification according to "Industry," of which the main categories remained the same. Hence the figures in Column 2 and Column 3 of this table represent the distribution of occupied persons by the "Industries" in which they worked, and not by their "Occupations."

‡ In all of these tables of employed persons, unless specified to the contrary, the category "Agriculture" includes "Forestry."

Sources: *Census of 1905, General Volume*, Table 45.
Census of 1930, Statistical Tables, Table 28.
Ch'en Cheng-hsiang, *Land Utilization in Taiwan* (1950), p. 62.

bear out the evidence of history during Manchu times, to the effect that a good many people had already been occupied in services connected with exporting and marketing primary produce.

Observations in 1905 cannot, of course, perfectly represent conditions ten years earlier—some Japanese were present in the statistics, and their influence in the economy was beginning to be felt. But these early census materials offer the closest approach to the pre-Japanese period that is possible. They depict a situation that must have been very similar to that of the final years of Chinese rule in Taiwan.

Table 11 summarizes the effects of major shifts in occupation throughout the entire working population, reaching to the eve of World War II. Though only an abbreviated picture, it belies any

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suggestion that the organization of livelihood in general had been profoundly altered under the Japanese. But any discussion of the problem very soon outruns crude data like these. Though Table 11 is comprehensive, covering all groups in the population, it lumps together people of too many kinds, and thereby hides many significant types of variation. The same material can be used more efficiently when refined by some of the controls at our disposal.

In the first place, not everyone in the population was equally well reported as to occupation. Asia being even more than the West a man's world, occupational data do not mean the same thing for males and females. Women are barred from many occupations and, whatever their duties, are not readily regarded in society as having regular employment. Whether a woman in Taiwan reported herself as being employed or not often depended on other attributes of her social position more than on the actual tasks performed—for example, whether she had yet been married, whether widowed or divorced, what work was followed by other members of her family, or simply local custom governing attitudes toward the work of women. For reasons that will be elaborated in the following chapter, we shall henceforth separate females from males in all occupational tables, under the assumption that the working activities of males more accurately reflect the composition of employment in the economy.

Omitting females from Table 12 has the effect of correcting the inflated appearance that they give to agriculture, especially in the earlier years. With this more meaningful series of observations, it is striking not merely that activities were so diversified in the beginning, but that they changed so little. In the 35 years that followed this first general census the structure of occupations among men remained about the same. By this more adequate criterion, agriculture lost almost no ground as a field of employment after 1905. Still nearly two-thirds of all working men were farmers as late as 1930, the terminal date for these figures. From Table 11 it is clear that the same thing must have been true in 1940.

And so, even including the Japanese, those who were caught up in the "industrialization" made up a minor part of all males in Taiwan. Demographically, this cardinal aspect of "economic development" was never anything but a small-scale operation.

Obviously, Table 11 and Table 12 cannot bring to light the full extent of trends accompanying events over this period. These figures indicate only shifts from one broad type of activity to another. They

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TABLE 12

OCCUPATIONAL COMPOSITION OF WORKING MALES IN TAIWAN TOTAL, ALL ETHNIC GROUPS

Per Cents of Occupied Males Reported in Each Occupation, 1905, 1920, and 1930*

Occupation	*1905*	*1920*	*1930*
Agriculture	67.7	64.3	63.1
Fishing	2.7	2.2	2.0
Mining	.6	1.5	1.3
Manufacturing	6.2	9.5	8.9
Commerce	7.8	8.3	10.9
Transportation	2.7	3.9	4.5
Gov't. & Prof.	2.8	4.1	5.1
Other	9.5	6.2	4.2
Total Occupied	100.0	100.0	100.0
Percent of Males Occupied	67.2	62.4	58.2

* Domestic servants have been excluded.
Source: Data of Table 16.

make no allowance for a more subtle kind of change—differences evolving within these groups of occupations.

These variations may take two forms. One consists of movement among the positions that comprise each broader group. This disturbance in the framework of positions can be taken as a result of innovations that actually altered the organization of work. It was noteworthy only in those lines where Japanese took a direct hand (see Table 13, below). Where it involved changes across the boundaries of the occupational groups tabulated in Table 12, the effects appear as occupational shifts from one census to the next. These one would expect to arise from such sources as the drawing of sugar workers from old into modern mills; from the wider shift toward factory work within the generic scope of "manufacturing"; the adjustment of commerce to the newer export industries; or the replacing of archaic transport or banking enterprises with wage-earning employees of Japanese concerns—though only a portion can be detected through the broad categories that we have used.

These differences also took a second form that cannot be conveyed in terms of the distribution of working activities. Many new skills were introduced within the existing arrangement or organization of work. The agricultural program was achieved primarily through this

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unobtrusive path, along with many of the spectacular improvements in productivity in other fields.[21] This form is the more elusive one to deal with, for it did not of itself produce shifts in employment. At the same time, the dimensions of economic achievement in Taiwan were too large to have been confined to the limits of occupational change shown in Table 12, unless they depended heavily on this second channel.

TABLE 13

RELATIVE GROWTH OF EMPLOYMENT IN DIFFERENT LINES
TOTAL POPULATION, ALL ETHNIC GROUPS

Occupation	*Ratios of Males Employed in 1930 to Those in 1905, by Occupation*
Agriculture	1.18
Fishing	.94
Mining	2.68
Manufacturing	1.81
Commerce	1.78
Gov't. & Prof.	2.28
Transportation, etc.	2.26
Other	.56
Total, All Occupations	1.27
Total Males	1.46

Sources: *Census of 1905, General Volume*, Table 45.
Census of 1930, Statistical Tables, Table 28.

Comparing the occupational structure at successive points of time is not the best measure of change. In some respects a better one is to indicate how the different lines of employment shared in the outstanding demographic trend, the growth of population. With 1905 as a base, the relative increase for each occupational stratum expresses more clearly the strides that were being made outside of agriculture (see Table 13).

These results would have been far different if none of the social changes under colonial rule had occurred—if, for example, the original situation had been fully stable, in the sense of being able to reproduce itself indefinitely, with no interference from outside or within save the single effect of population growth. (It is, of course,

[21] The two approaches were not independent. For example, introducing the use of fertilizers on a wide scale did not appreciably interfere with the management of peasant farms; but it did stimulate a lively business in supplying commercial fertilizer materials. The important point is that the two types of effect often fell in different places—in this case, the fertilizer trade went chiefly to Japanese importers.

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nothing more than a hypothetical exercise to assume this course of events, since population growth itself presupposes some conditions that had not been present before.) Under these assumptions, presumably each occupational stratum would have received an equal share of the increase, and the ratios of expansion for all would have been identical. The fact that they grew so unevenly illustrates that the actual events departed considerably from this imaginary sequence.

Several conditions would be required in order to maintain this hypothetical stability. People would need to follow well-accepted rules in adopting occupations, customs that would impede any widespread transfers by individuals from one kind of work to another. Chinese have for centuries come close to this result by passing many types of work down from fathers to sons. In Taiwan, keeping the various lines of work in balance would have implied a close adherence to such traditions by most of the population, as it did in the past. In effect, the unequal ratios of increase between occupations meant that many men who would have become farmers did not, but entered some alternative employment instead.[22]

Table 13 also indicates which occupations were most affected. Employment expanded rapidly in some of the fields where Japanese capital was prominent. These were also the fields that employed technical specialists and made the least use of the traditional fund of skills existing among the Taiwanese. Growth in these lines did not necessarily broaden employment opportunities for Taiwanese. There were in all 26.6 per cent more occupied males in Taiwan in 1930 than in 1905,[23] but 2.3 times as many in professional and administrative positions and in occupations connected with transportation, 81 per cent and 78 per cent more in manufacturing and commerce respectively. The farming segment in the population lagged slightly behind the total of employed men; but it was so large initially that it could relinquish large numbers of actual or potential members to other occupations before showing signs of the loss.[24]

[22] This aspect of occupational transfers will be taken up in some detail in the next chapter.

[23] This ratio is less than the increase in the general population, because changes in the age composition over this period raised the proportions of children and aged persons in the total. The proportions of men occupied in the prime working ages—15 to 64—remained practically the same.

[24] Losses from agriculture did not supply all of the additional employment in the expanding fields. The group "Other Occupations" was the source of almost the same portion of the inequalities in these figures. Being a catch-all, this category is always a weak spot in occupational statistics. In Taiwan it was made up chiefly of "day laborers,"

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These ratios measure how far each occupation increased irrespective of its size in relation to others at the start. Table 13 therefore expresses the force of events on each occupation, and not the force of occupational changes in the economy. This being the case, they should not all be given equal weight. The development of mining, by this criterion, exceeded any of the other fields. Though truly a creation of Japanese exploration and investment, the mining industry in Taiwan never reached any substantial size, and does not merit special attention as a field of employment.

Lacking detailed evidence for the period following 1930, some conjecture is needed. Official sources and more recent descriptive materials in English are unreliable, since they invariably exaggerate the extent of Japanese achievement. We have certain data, however, to suggest the dimensions of expansion in demographic terms. While Japanese planners tried to raise production in all lines, they concentrated on a few specific items that were especially important to Japan. They paid most attention to enlarging factory facilities for the processing of primary products. Hence, it should be possible to detect some of this flurry of new activity in the numbers of people working in factories.

Statistics of factory employment in Taiwan were begun in 1914, and published each year ending in 1941. They fell far short of being perfect indicators, being subject to many kinds of inaccuracy that a census enumeration can easily avoid.[25] Nevertheless as a series of observations they furnish very useful results. The rise of factory employment may be compared with growth in the total population in Fig. 10, where the numbers of persons employed in "factories" from year to year are plotted on a logarithmic scale. The growth in total population and in agricultural population is also shown, in hundreds of persons.

Factory employment rose steadily from the beginning to the end

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not otherwise classified. Its decline represented some actual movement of workers and new recruits into new jobs, and in part merely assigning of new names to the same work. This circumstance tends to magnify the difference between agriculture and other occupations, but does not otherwise distort the picture shown in Table 13.

[25] They apparently paralleled the corresponding figures for Japan in covering all factories with more than five workers. They were published without explanation of standards or procedures, which were less rigorous than those used in the censuses. It is not specified whether factory workers were full or part-time workers; they are not shown separately by ethnic affiliation; their numbers must have increased (independently of any change in actual employment) by the adding of new enterprises to the reporting system; and their actual duties are not given.

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463/62 of this period. There were only two departures from this growth—the prosperous days of 1920 and 1929 and their aftermaths. Overlooking these brief deviations from the trend, the average rate of growth from 1918 until 1935 was *no greater than that of the total population*. Only in 1936 did the force of economic expansion reach the population to the extent of diffusing factory work more widely through it.

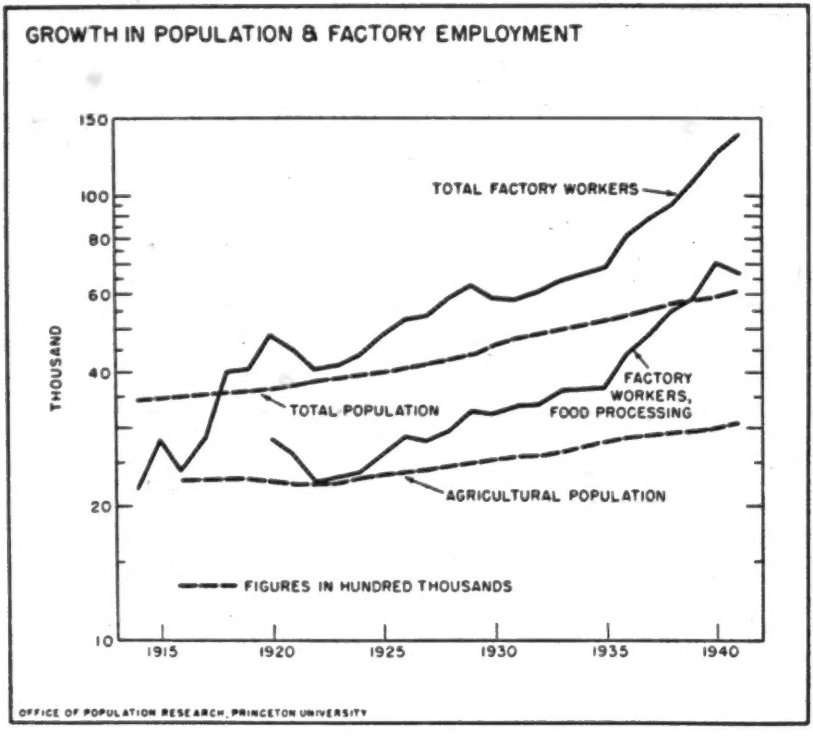

Fig. 10. Increase of Factory Employment and of Population in Taiwan, 1914-1941.

The largest part of the total (about 55 per cent) was made up of workers in sugar mills (see Fig. 10). The sugar industry kept its priority in the later economic planning. It serves as a reminder that the expansion of production continued to be dominated by this single industry, systematically nurtured and expanded as a source of alcohol for Japan.

The evidence for the spread of factory work can be supplemented

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by the annual registry of agricultural population (i.e., members of families dependent on agriculture).[26] The two major spurts in factory employment occurred during the first World War and just preceding the second. These were the only two periods of substantial slackening in gradual increments of farm population to the point of actual decline in the early 1920's. After 1940 this portion of the population resumed its usual rate of growth, suggesting that the opportunities for shifting the balance of employment had begun to disappear.

Occupational Shifts: Taiwanese and Japanese

The data up to this point illustrate some of the redeployment of manpower in the economy. They give no basis for considering the social changes that were responsible, for they do not disclose who were the participants. To understand how manpower responds to altered environmental conditions, one must know some of the affiliations that have shaped its members' decisions. Moreover, "economic development" is of no great interest here for its own sake, but rather for the nature of its reception and use by peoples not yet under its full influence. Therefore the Taiwanese are the important group to observe, and in a different sense the Japanese in their role of aliens on the scene.

Most of the apparent diversification in economic activities shown in Table 12 did not consist of movements in the Taiwanese population at all. It reflected primarily the special characteristics of Japanese in Taiwan. Though never more than one-twentieth of the total population, their nationals were so concentrated in certain special positions that they often outnumbered Taiwanese. Once this special group is removed (Table 14), Taiwanese appear to have contributed only a small amount to the total occupational shifts up to 1930. Separated from the presence of Japanese in these key posts, the part of Taiwanese in the modernized sectors of the economy was indeed a modest one.

[26] The total population and agricultural population have been reduced to one-hundredth of their size to fit into Fig. 10. They can consequently be used to show more than merely relative trends. Where either one intersects a trend line for factory employees, the ratio of the latter to the former is 1:100, or 1 per cent. (Of course, the scale being logarithmic, the same relation does not hold between points separated by larger intervals.) This circumstance helps to point out how small the total amount of work in factories was in relation to the entire population. At its peak, judged by these figures, it occupied less than 3 per cent of the population. It remained under 2 per cent for most of this period.

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TABLE 14

OCCUPATIONAL COMPOSITION OF TAIWANESE
Per Cents of Occupied Males Reported in Each Occupation,*
1905, 1920 and 1930

Occupation	*1905*	*1920*	*1930*
Agriculture	69.9	68.9	68.0
Fishing	2.8	2.2	2.1
Mining	0.5	1.4	1.3
Manufacturing	5.6	7.9	7.6
Commerce	7.4	7.6	10.2
Transportation, etc.	2.2	3.2	3.9
Gov't. & Prof.	1.8	2.2	2.7
Other	9.8	6.6	4.2
Total Occupied	100.0	100.0	100.0
Per Cent of Males Occupied	66.7	61.8	57.7

* Domestic servants have been excluded. Occupations are adjusted in 1905 and 1920 to be comparable with 1930.
Source: Data of Table 16.

As for the Japanese, most who were old enough to work had been born in the Home Islands. All of these had arrived in Taiwan as a result of some decision to move, and presumably had some purpose in being there. Theirs was a highly selective migration. It brought in the promoters and technicians, the industrialists and clerical personnel, the officials and minor functionaries to operate this first colonial venture. As in most colonies, they enjoyed facilities and perquisites of a superior type—better, if not to conditions generally prevailing in the home country, at least to the standards that they as individuals could have expected at home.[27]

Much of the migration was coordinated with economic policy.[28]

[27] On top of better vocational opportunities, Japanese commonly received special bonuses for service in Taiwan. Rates of pay for comparable wage labor in Taiwan were consistently higher for Japanese (see *Statistical Summary*, Tables 301-303).

[28] This had not always been the case. For most of the first decade after 1895, Japanese were permitted to go to Taiwan with little restriction. The freedom attracted an "undesirable" element to the island, whose business activities were so unbridled and uncoordinated as to call forth a stricter government policy to deal with incoming personnel. Japanese looked back from the later ordered development on this early chaotic period with horror. The unsatisfactory results of laissez-faire may also have contributed to the decision to centralize the most profitable opportunities in state hands. Through official monopolies in the major export lines, it was possible to regulate continuously the conduct of Japanese businessmen as well as to make substantial levies in these enterprises for revenue.

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Japanese drew lessons from the colonial experience of European powers in supplying the special skills and competencies that their program required. Government and private industry recruited their personnel from Japan, according to needs which they determined in advance. In one respect they learned the lessons of staffing their technical positions better than their teachers: they paid more attention to procuring lower levels of skills from their own ranks along with filling the top functions. Important implemental positions, like police, railroad technicians, and maintenance men, were heavily staffed with Japanese.

All Japanese nationals, regardless of whether specially recruited or not, were favored over Taiwanese when employed by Japanese concerns.[29] The best openings were in professional and official positions, as administrators in government and finance. Less coveted, but still bearing prestige over Taiwanese counterparts, were the jobs of technical and skilled workers in transportation and industry, and petty officials in the government bureaucracy. In every census Japanese appeared consistently in these occupations (see Table 15).

As a group, they were conspicuous in staying out of agriculture,

TABLE 15

OCCUPATIONAL COMPOSITION OF JAPANESE IN TAIWAN

Per Cents of Occupied Males Reported in Each Occupation,* 1905, 1920 and 1930

Occupation	*1905*	*1920*	*1930*
Agriculture	1.0	4.4	4.6
Fishing	0.6	2.0	2.1
Mining	5.0	1.9	0.5
Manufacturing	20.6	27.4	18.2
Commerce	16.5	15.0	14.6
Transportation, etc.	13.9	11.7	11.0
Gov't. & Prof.	41.3	37.2	45.6
Other	1.1	0.4	3.4
Total Occupied	100.0	100.0	100.0
Per Cent of Males Occupied	80.4	69.0	60.8

* Domestic servants have been excluded. Occupations are adjusted in 1905 and 1920 to be comparable with 1930.

Source: Data of Table 16.

[29] Notwithstanding, the colony had its failures. The census reports list a scattering of Japanese as day laborers, ricksha pullers, longshoremen, and in similar occupations.

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despite the fact that most were engaged in some capacity in helping the passage of farm products to Japan. Japan made almost no use of Taiwan as an outlet for its own growing agricultural population. From time to time the authorities announced projects for settling farmers from the Home Islands. These plans may have been designed to make a favorable impression among government circles in Japan itself; none ever proved feasible in Taiwan. Only a few thousand "colonists" of this type came to Taiwan and made a start in farming. In spite of manifold blessings of official support, subsidies, and special privileges, the settlements never managed to prosper. The families often left the countryside for better employment in towns and cities, and during the 1930's the whole idea was abandoned.[30]

Taiwan's economy was thus organized not only to export its narrow range of commodities to Japan, but to import its basic specialized skills in the persons of Japanese migrants. For the authorities this was an easy answer to the problem of staffing essential functions with people of appropriate training and experience. It avoided, among other things, the need to devise means for securing them from the human resources at hand in Taiwan. From the standpoint of Japan it was not an efficient solution. It drew upon types of manpower that the Japanese at home could not well afford to lose, and at the same time failed to make the best use of talents existing among the Taiwanese.[31] This anomaly in distribution of skills between the two areas is illustrated in Fig. 11. Japanese residents in Taiwan were a highly selected group even for Japan itself, where technical abilities were also scarce.

Possession of an external source of supply for specialized skills had

[30] Yanaihara, Tadao (1929), pp. 174-175, notes that it was already a failure before 1930.

[31] The founding of Taihoku Imperial University was an outstanding example of this policy. It was an institution of high caliber, well equipped and operated by men of repute in Japan. The University notably did *not* engage in training any considerable number of technical personnel among Taiwanese. It was organized to promote research rather than teaching, its classes were small, and Taiwanese students were not readily admitted. See Kerr, George H. (1942), p. 53 ff.

On a more practical plane, several technical schools were later established for limited training of Taiwanese. These, to use the common expression of educators in this country, were "vocational" rather than "professional" in that they taught manual instead of liberal skills. Enlargement of educational facilities came too late to provide the technical training needed for the war effort, though it did serve to advance literacy (in the Japanese language) among Taiwanese youth (see *Census of 1930, Statistical Tables*, Table 81). Once started, the spread of educational facilities made considerable headway. By 1945, 70 per cent of Taiwanese children of legal school age were attending some sort of school. In time this more liberal turn of policy might have paved the way for admitting Taiwanese into more responsible positions in the island's new industrial program.

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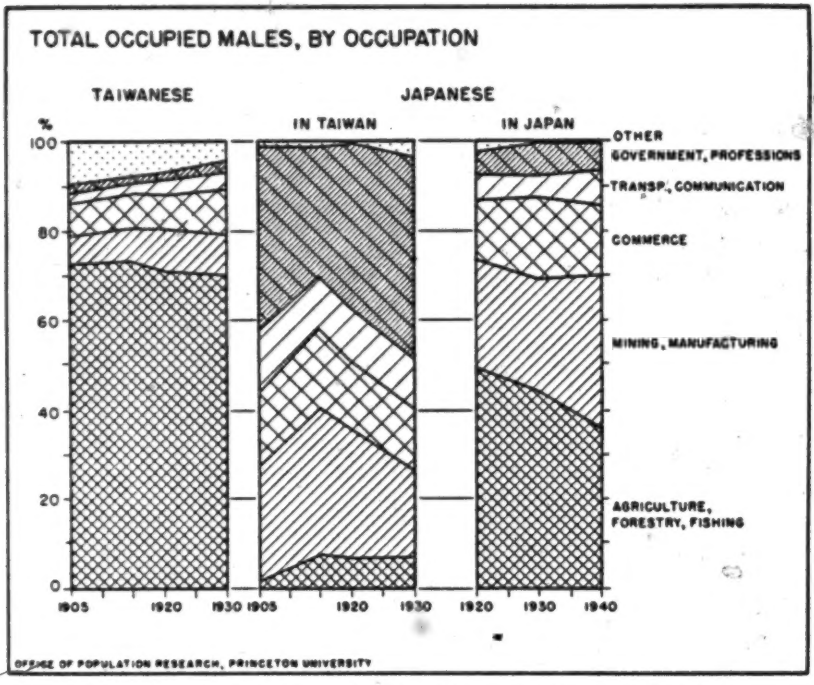

Fig. 11. Trends in Occupations in Taiwan and Japan, 1905-1940.

certain cogent advantages. The alien status of Japanese nationals was useful in keeping high standards of responsibility and performance among members of the public and private bureaucracies. This personnel could be interposed to administer Taiwanese affairs without becoming susceptible to local pressures. Though the Japanese had gained access to the rural society by manipulating its traditional institutions, they had to guard against subversion of their administration by influence from the Taiwanese side.

They did not succeed, as no large organization has, in making their officials completely disinterested and honest. There were scandals and reports of self-enrichment on the part of several of their highly-placed nationals. When it came to collusion with Taiwanese, however, they were all but incorruptible. The instances of improbity that achieved publicity in Taiwan were mostly between government and business interests. Irregularities of this sort did not threaten the objectives of the regime, for these parties had more at stake together than at issue in the economic expansion. Much of what was lost in

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563 this wasteful scheme of recruiting from abroad therefore must have been regained in the form of security against the conservative influence of tradition from within.

In one respect, however, this policy proved to be an unqualified loss to the Japanese. They established a caste-like status for their own nationals, hedged about with favoritism in employment, education, and business opportunity. This widened the gulf that the general severity of their rule had made between themselves and the Taiwanese. The enmity that they had earned among the population left them unprepared to bring it effectively into the last-minute industrial effort called forth by the war.[22]

We know from the Japanese themselves that the latter 1930's were for them years of exceptional new decisions and vigorous efforts at expansion. Official policy began to assert itself more strongly in matters of industrial planning and investment. The previous success in aiding farm production, which had given official circles some occasion for complacency, suddenly became inadequate. The government began at a strenuous pace to mobilize Taiwan's economy for serving the broader purposes of the Empire.

563 463 162 On very short notice they sought to transform Taiwan into a quasi-industrial appendage of Japan. The attempts to encourage new aptitudes and incentives among Taiwanese are as interesting to contemplate, in terms of their implications for manpower, as were the attempts to prevent this very development. The two objectives are of course incompatible, but they were fostered side by side by the Japanese under the stress of preparing for war. Yet by 1940, at the peak of all this energy, the portion of the working population employed outside of agriculture was scarcely greater than at earlier census dates—still only one-third, and this figure includes an undetermined number of Japanese residents (see Table 11). Only a tiny fraction of the people in Taiwan had taken up factory employment, and many of these were also Japanese. We are left with the conclusion that Japanese colonial policies and indigenous tradition had combined to restrict social change within a small segment of the population. Japanese comprised most of this segment. New activities were spread thinly among Taiwanese, and left the remainder engaged in the same pursuits as their ancestors for countless generations.

[22] During the quickened prewar mobilization of their resources in Taiwan, despite the crowded condition of agriculture, Japanese businessmen actually complained of a *shortage* of labor in industry.

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TABLE 16

Taiwan: Total Males, and Males with Occupation Distributed by Occupation, at Census Dates, 1905 to 1930. Total All Groups, Taiwanese, Japanese, and Others*

Occupation	*1930*	*1920*	*1915*	*1905*
TOTAL MALES				
Occupied	1,369,877	1,180,842	1,155,777	1,081,667
Agr. and Forestry	864,884	761,047	776,181	731,479
Fishing (Excl. Salt)	27,709	25,858	26,911	29,465
Mining	18,345	17,240	9,741	6,843
Manufacturing	122,066	112,063	94,338	67,526
Commerce	148,847	97,726	93,171	83,815
Transportation	61,323	45,645	38,901	29,139
Gov't. and Prof.	69,644	48,018	34,737	30,566
Other	57,059	73,245	81,797	102,839
TAIWANESE MALES				
Occupied	1,265,185	1,100,297	1,088,199	1,045,667
Agr. and Forestry	860,613	757,917	772,437	731,102
Fishing (Excl. Salt)	25,916	24,261	26,150	29,260
Mining	16,970	15,629	8,319	5,203
Manufacturing	95,832	87,314	72,444	58,833
Commerce	129,372	83,600	79,823	77,060
Transportation	48,677	35,428	29,505	23,186
Gov't. and Prof.	34,260	23,811	19,177	18,923
Other	53,545	72,337	80,344	102,100
JAPANESE MALES				
Occupied	75,812	63,853	53,403	27,835
Agr. and Forestry	3,474	2,815	3,430	285
Fishing (Excl. Salt)	1,617	1,310	611	170
Mining	411	1,187	1,113	1,360
Manufacturing	13,796	17,530	16,482	5,739
Commerce	11,043	9,567	9,498	4,592
Transportation	8,360	7,466	6,273	3,871
Gov't. and Prof.	34,511	23,751	15,328	11,502
Other	2,600	227	668	296
OTHER MALES				
Occupied	28,880	16,629	14,169	8,165
Agr. and Forestry	797	315	312	86
Fishing (Excl. Salt)	176	280	150	35
Mining	964	424	309	260

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TABLE 16 (continued)

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Occupation	*1930*	*1920*	*1915*	*1905*
Manufacturing	12,438	7,209	5,410	2,954
Commerce	8,432	4,538	3,849	2,163
Transportation	4,286	2,727	3,122	2,081
Gov't. and Prof.	873	455	232	143
Other	914	681	785	443

* For comparability, Domestic servants are excluded at all dates; Ceramics workers are assigned to Manufacturing in 1905 and 1915; Salt workers are assigned to Manufacturing from Fishing in 1905, 1915, and 1920.

Sources: *Census of 1905, General Volume*, Table 25.
Census of 1915, Statistical Tables, Table 66.
Census of 1920, Descriptive Report, Appendix, Tables 51 and 52.
Census of 1930, Statistical Tables, Total Island, Tables 45 and 46.

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one can really say next to nothing about the employment of Taiwanese women. Henceforth, except for special purposes, we shall confine ourselves to using occupational data for men only.

Occupational Composition of the Male Labor Force

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With the outline of total employment among males of different ages now established, it is only a matter of course to follow up by showing the occupational composition of the same group. This amounts to a close view of the data in Chapter III, considered for the moment apart from the differences in age structure and differences in the extent of employment in various ages.

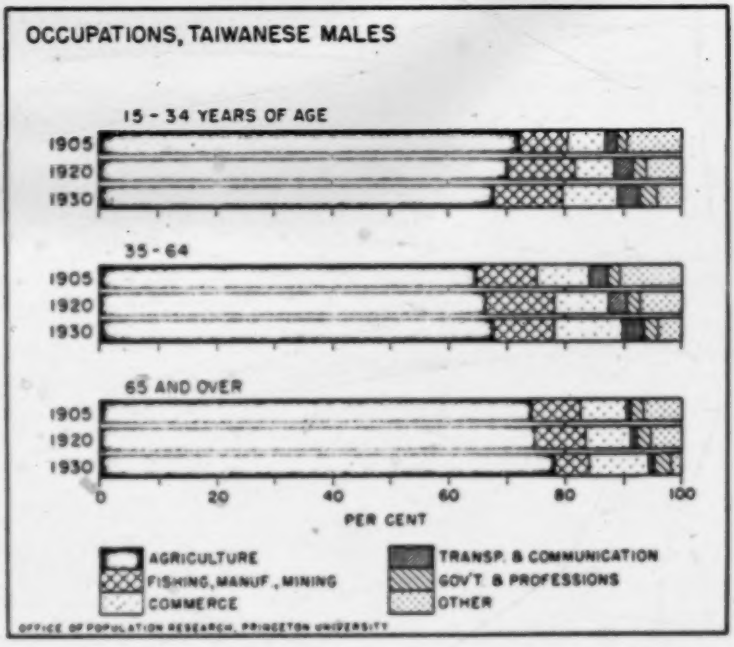

Fig. 12. Occupational Composition of Taiwanese, by Age, 1905-1930.

Even taken by separate age groups, Taiwanese men were performing the same types of work after 25 years of colonial rule as at the beginning. The situation can be efficiently summarized in Fig. 12, which bears out in some detail the evidence of the last chapter. As regards the whole of the male working population, the stability existing from one time to another was not exaggerated in Chapter III.

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162 Broad features like these were reduplicated in a degree that over-
463 shadows all accompanying trends—in this case down to the disposition of manpower at all working ages at successive dates. Fig. 12 shows clearly that this society had, up to 1930, put new generations to work along lines very similar to those of the old.

That these proportions should remain almost constant through time implies great stability of the agrarian social order. But this evidence is of a nature that best illustrates the more prominent relationships, and does not give much weight to the shifts that did occur. Farming activities again appear predominant—as in fact they were—to the point of eclipsing the trends in growth of other types of employment. These can be brought out only through the use of more responsive measures.

Moreover, even this degree of stability does not mean that individuals could not have moved from one occupation to another. A circulatory movement of individuals is fully consistent with the data of Fig. 12, provided that the avenues remained unchanging. It is not only possible but implied by the data themselves. In Fig. 12 the swelling and contracting of employment among different occupations from lower to higher age strata of course represent only the positions of people in these ages at one time; but a pattern that is repeated so closely in three successive censuses can hardly reflect just the events of a short period. Over such a long span of time, unless the various occupations lost their members through widely different rates of death and retirement, this pattern could come about only from losing them through movement to other occupations.

If part of this movement is a matter of such circulation, it demonstrates all the more strongly the part of traditional institutions in maintaining the society against the forces of change. Movement of this type will not be readily distinguished from shifts as a result of actual change, when the two are later analyzed apart from the composition of the labor force. It is therefore important to make clear at this point that whatever the extent of such shifts (as yet undisclosed by these techniques), there must always have been a prominent element of circulation involved.

Movement between Occupations

463 The data of Fig. 12 are poorly adapted to illustrate the nature of occupational movements in the population. Agricultural employment is preponderant, and masks the shifts that individuals actually

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made between the classes of occupations that are listed. All movements in other lines of work hence appear small because they were absorbed in the numbers of all occupied persons, instead of being compared with the numbers that had been in each line before.

Some moves of occupation always occur in conformity with traditional usages—like entry into the labor force itself, moving from one position to another with gradual acquisition of skill, the advancement of successful men and the decline of failures, and eventual retirement from active work. Shifts such as these are found even among the peoples who are the most bound by custom, and do not depend on the existence of new social conditions. The problem in this section is to develop a more sensitive procedure to detect some of these transfers.

A more direct approach to this "hidden" movement is to locate persons in their later occupational careers after they once have started. Comparing the population in the *same* interval of age at two successive points of time meant that we were dealing with different people each time. Their selection of occupations might have been the same at both dates, since one of the functions of tradition is to perpetuate a given system of choice in new generations; but this type of comparison might not reveal what happened to any of them after the first observation was made. Uncovering this subsequent behavior rests on finding the same persons at a later date, which means also at different ages.

Age, as regarded by demographers, is one of the few characteristics carried by people that are predictable indefinitely into the future. Those who were in age 20 in 1920 will be exactly age 30 at the same time of the year in 1930. Accordingly, those persons who reported an occupation in 1920, and survived, can be located in an age interval exactly ten years higher in 1930. By the simple device of assembling the appropriate pair of figures and removing those who died during the interval, occupied persons in any age group can easily be compared with their survivors at the later date. One can then find whether, as a group, they still remained occupied, and to what extent.

The same basic reasoning applies as between one type of employment and another; the survivors of a group of farmers at one time, for example, can be compared with the numbers actually found at another. The difference in this instance would represent the net gain or loss to these farmers in relation to the remainder of the economy,

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• 463 including entries, retirements, and transfers to other classes of occupations.

As in all formal problems in which one seeks to determine the influence of some factors while removing others, this procedure requires that certain conditions be met. First of all, the population should be one in which some significance may be attached to "net movement" between occupations. In an industrial society, occupational transfers are frequent: over a period of several years an individual may make multiple moves, or certain occupations may be subject to many entries and exits among members of a given age group. If widespread, either of these types of event would make an estimate of net change meaningless, because they would distort it as an indicator of the true number of moves. In Taiwan, with foreknowledge that few people changed occupations after first adopting one, it is safe to assume that net movement is a good approximation to total movement across broad classes of occupations.

Second, it should almost go without saying that occupational categories used in this comparison should be comparable, if not identical, at the two points of time. This condition is moderately well satisfied among the different occupations as they are arranged here.[16]

Next, the risks of death at each age should, for perfect accuracy, be equal from one occupational group to another. It is unlikely that this condition could be strictly fulfilled in any population. In Taiwan, many of the pursuits that were conducted in cities, for example, were probably more healthful than farming, for the hazards of city life were not greater than those in the countryside. Here, the mortality estimates that are used must be derived from the average experience among all Taiwanese males. Since no allowance can be made for variations between different occupations, some unknown biases probably enter the computations from this source.

Age reporting must be very accurate in order to give assurance that the persons being compared are the same. By defining age in terms of the date of birth, the censuses of Taiwan developed age reporting that was more accurate and consistent than in most Western countries. While between 1920 and 1930 there was a slight change in

[16] With one exception, which will be pointed out below. There must also be reason to believe that the activities comprising a given occupation have themselves not greatly changed over the period. This is one condition over which the investigator has no control whatever. We can simply assume for Taiwan that it is met reasonably well for the period in question.

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the technique of assigning age, it was systematic through all ages and cannot create bias either by age or by occupation.

Finally, because mortality estimates are usually applied to a population in the form of survival ratios, persons should be distributed evenly within the intervals of age that are used. When these intervals are broad, there is greater chance of introducing some inaccuracy due to uneven grouping within them, since mortality is known to vary with age. The intervals used for this manipulation all spanned 5 years of age, and some element of control is therefore lacking. This is especially true for occupied persons aged 15 to 19, the only group that departed greatly in internal composition from the general population.[17] There is no reason to believe that the imprecision arising from this source should create any appreciable bias by occupation. Even where certain occupations may have distinctive age patterns of recruitment or retirement that give them age groups with unusual internal structure (e.g., farmers aged 15 to 19), the bias is very small.[18]

These conditions would have to be met in order to apply the procedure we have outlined to make estimates that are precise in number. But the procedure itself is only an approximation. Nonfulfillment of any one of the conditions would not necessarily be serious, and could be foreseen and minimized by some arbitrary correction. No allowance can be made for the interaction of all of them, and for this reason some caution is appropriate in interpreting the following results.

With these qualifications, the way is clear to construct a set of comparisons between 1920 and 1930 according to the outline above. We shall estimate the balance of men entering and leaving ("retiring" from) the working force by subtracting the survivors of those who were already at work in 1920 from those who were found with employment in 1930. (The survivors from 1920 are advanced ten years of age: all ages given in the following tables represent ages achieved by 1930.) In the same way, we shall estimate the balance of

[17] The mortality estimates were formed by life table ratios of L_{x+10}/L_x. For convenience, and because it made no perceptible difference in the results, values were used for only the middle year of age in each 5-year interval. The values employed were taken from tables for actual cohorts, developed in connection with a later part of this study. They thus represent the actual mortality experience of the middle age cohort in each 5-year interval.

[18] Actually, to avoid *bias* by occupation from this source, the condition may be relaxed from that of *even* internal age distributions that are the same among occupations within a given five-year interval. This problem is therefore less serious than it would first appear to be.

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463 movement into or exits from a given occupational class by subtracting the survivors of those at work in that occupation in 1920 from those found at work in that occupation in 1930. The results of these operations can be designated as "gain" or "loss"; the ratios of these numbers to the calculated survivors as "per cent gained" or "per cent lost."[19]

Drawing upon the range of ages from 15 to 64 carries the comparison through the span of greatest employment. The figures furnish in cross-section a picture of occupational movement in any selected categories with respect to all the remainder. While a cross-section, it is not an instantaneous view. Each entry in the table is based on the experience over a 10-year period for the given age group. Hence the number of age groups that can be usefully included is restricted by the length of this period. Older men have been dropped at age 70, which means that this last group was aged 55-59 in 1920. Similarly, the youngest age group is that of men 25-29, since in 1920 they were only 15-19, and too few of the boys under age 15 claimed occupations in 1920 for them to be of great interest.[20]

The *differences* between survivors and actual workers in 1930, and the ratios in which they stand to the numbers of survivors, are the most useful forms for interpreting these estimates. In Fig. 13 these are shown graphically in the arbitrary categories of "gain" or "loss," as explained above. The bar diagram in Fig. 13 shows the actual numbers of net entries and withdrawals, during the decade 1920-1930, of all occupations taken together. It is of some special interest in establishing the shape of these movements at different ages throughout the male labor force, and as a standard against which to compare the patterns for separate occupational groups.

More important here is the second part of Fig. 13, giving the *percentages* of the survivors of 1920 workers who had changed their occupational status between 1920 and 1930. Along the middle segment of the age scale, these percentages are practically zero (ages 30-44, covering the actual age span of 20-44). The working force as a whole was almost stationary over this entire interval, consisting of those persons who were already employed, with few entrants and few withdrawals in relation to the numbers who were already there. Over this span it is not likely that many entries and exits occurred

[19] Where entries are still taking place, these are not true proportions: the numerator is not included in the denominator.

[20] By a special arrangement, it will be possible somewhat later to deal more adequately with the males 15-19 and to include the group 10-14.

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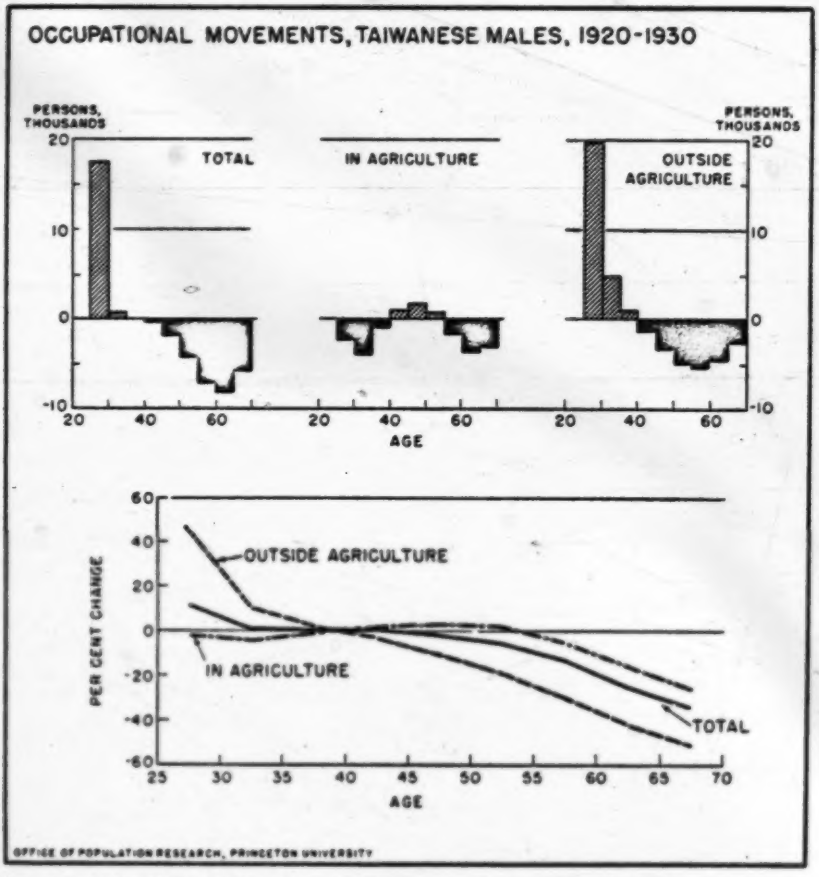

Fig. 13. Occupational Movement of Taiwanese Males, 1920-1930. Net "Gain" or "Loss" Inside and Outside of Agriculture, and in the Total Labor Force.

so as to balance each other; clearly few men began or left off work completely (except through death) in these ages, and what movement there was must have been limited to transfers from one occupation to another.

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It was established above (Table 17) that the maximum degree of employment was reached by age 30. It follows from these data that in this decade almost everyone who was likely in his life-time to acquire an occupation had already done so at age 20.[21] By similar

[21] A small part of this pattern may possibly be a peculiarity of the unusual decade involved. The census of 1930 was taken during a world depression, which had a brief but severe effect in Taiwan. There are hints that this was reflected slightly in the pro-

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464 reasoning, 90 per cent of all men who were going to become employed by 1930 must have held occupations already between ages 15-19 in 1920: since only 10 per cent of the employed survivors to this group had begun their employment later than 1920, though by 1930, at ages 25-29, the ones with occupations already accounted for almost all the population in that age.

One takes for granted that the boundary lines between being occupied or not were somewhat indistinct among young men entering and old men leaving the labor force. Even so, Fig. 13 gives a picture of the age incidence of retirement just as interesting as its evidence for the stability of employment through earlier adult ages. Starting with the men who reached ages 45-49 in 1930, the rate of exits from occupations over the preceding 10 years rose sharply with advancing age. Of the Taiwanese aged 55-59 in 1920, more than half the survivors had retired before age 70. Earlier ages exhibit what appears to be a gradual progression toward this rate of retirement. This would hold true even if we assume that the world depression in 1930 forced older men out of the labor force more rapidly than in normal times. The pattern would remain the same; only its age spacing would change.

These findings tend to conform to what the earlier chapters would lead one to expect. They do not provide much new information (except by way of verification of the procedure that is being used). Of greater significance are the patterns that hold among the occupations that make up the labor force. This is shown in Fig. 13 where the bars also represent the numbers of Taiwanese males "gained" or "lost" in 1930 as compared with 1920.

• 463 Agriculture is the most striking of these. There was an actual loss of several thousand young adult men who had been farmers between the ages of 15 and 30 in 1920. This does not imply that agriculture was failing to recruit new farmers. The losses in part reflect the fact that males undertook occupations at younger ages (at least in their census returns) in farming than in other pursuits. Agriculture gained many of its entrants *before* age 25 (the youngest age shown in these charts); by age 25 it may or may not have continued to re-

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portions of older men claiming some occupation in 1930. Despite the tendency of the "customary occupation" census concept to resist inroads of short-term unemployment, these proportions are slightly lower in advanced ages than those in previous censuses. Even so, the "true" figure might make the proposition above even stronger, by revealing "normal" retirement to have been slower than Fig. 13 suggests.

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cruit new workers—something that this procedure can never reveal—but was in any case exporting enough young men to the rest of the economy to outweigh these and create a net loss of workers.

Though substantial in the total number of workers involved in net movements among other occupations,[22] this rural exodus fades into insignificance when related to the number of men in these lower ages who remained in agriculture (Fig. 12). Obviously the standard against which to measure these events has much to do with assessing their importance. Losses of young men from agriculture supplied a fair share of all the entrants to other occupations in these ages. But this movement was not enough to make more than a slight inroad in the store of manpower for farming—and was more than offset by recruitments with agriculture between the ages 10-14 and 20-24. In this age interval, agriculture absorbed more than half of the total entrants to all occupations from 1920 to 1930.

If among the survivors of, let us say, all males 15-19 agriculture had merely matched its own recruitment to the scale of the total labor force (i.e., that of Fig. 12, above), two-thirds of the total entrants to the labor force in this age would have become farmers instead of entering other occupations as in fact they did.

No less important is the stream of older men—40 to 54 in 1930—who were entering agriculture. Though numerically not a large group, they reveal a degree of movement at least as great as that of the persons who abandoned farming at younger ages.[23] These were the ages in which "retirements" from other occupations were beginning. If we assume that the exodus of young farmers was a "normal" occurrence (and some of the earlier census data suggest this is so), it is almost certain that these older recruits to agriculture were re-entrants or "returnees" who had previously left.

The figures again reveal only *net* movement; if some farmers of these ages were "retiring" from agriculture, then returnees must have been more numerous than the actual figures here indicate. Evidently agriculture not only supplied young men to other parts of the economy, but reclaimed older workers that other occupations

[22] It needs to be emphasized frequently that the procedure we are following does not give an exact estimate of the total number of men who left agriculture for other work, even in the decade in question. Some of the actual exits were probably balanced by new recruits, though the number at these ages was undoubtedly smaller for agriculture than any other occupation.

[23] I.e., in view of the fact that not many men were alive in these ages, these entrants bear a larger proportion to the total number of farmers of the same age. Their significance in this respect can be read from Fig. 13.

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463 had discarded. Re-entry to agriculture was thus for some men an alternative to ceasing work altogether.

The data for other occupational groups can best be examined in Fig. 14. The bar diagrams show the amounts of net gain or loss, which should be compared with the total amount in Fig. 13. The chart of percentages gain or loss gives the corresponding view of movement for each, taking into account at each age the number of persons who were already there. The first indicates the numbers of people involved; the second abstracts from this.

Due to changes in census practice, certain of the chief occupational classes must be lumped together so as to be comparable between 1920 and 1930. These consolidations make it impossible to say very much about activities in the non-agricultural portion of the economy that is not already implied by the relation of agricultural employment to all of them. This sector can be split into three main parts to compare their uses of manpower: industry and commerce (also including fishing and mining), professional positions and public administration, and transport and communications. Though not of the same size, all three of these classes absorbed and released workers in a similar age pattern, and all were distinct from agriculture and from the total labor force (see Fig. 12 and Fig. 13). All were most conspicuously users of youth, and taken together they obviously depended on people already working in agriculture for recruits. To some extent all, but especially transport and communications, tended to cast off older workers sooner than agriculture.

Evidently workers in transportation and in professional fields or the administrative bureaucracy were recruited more exclusively while very young. This is not surprising, in view of the fact that most Taiwanese held only junior positions in these fields, and frequently positions where some specific technical training put youth at a premium (for example, drivers of motor vehicles, railroad trainmen, school teachers, telegraph workers, clerks).[24]

Finally, a few words are required about the group of "other occupations." The steady "loss" of persons from this category is a fixed feature of Taiwan's whole succession of occupational censuses. Under the assumptions applied in the rest of the occupations, Fig. 14 would appear to indicate a flood of departures, in all ages, from these mis-

[24] However, transportation workers also included a number of pullers of rickshas and other carts, who would likewise tend to enter this employment while young, but for different reasons.

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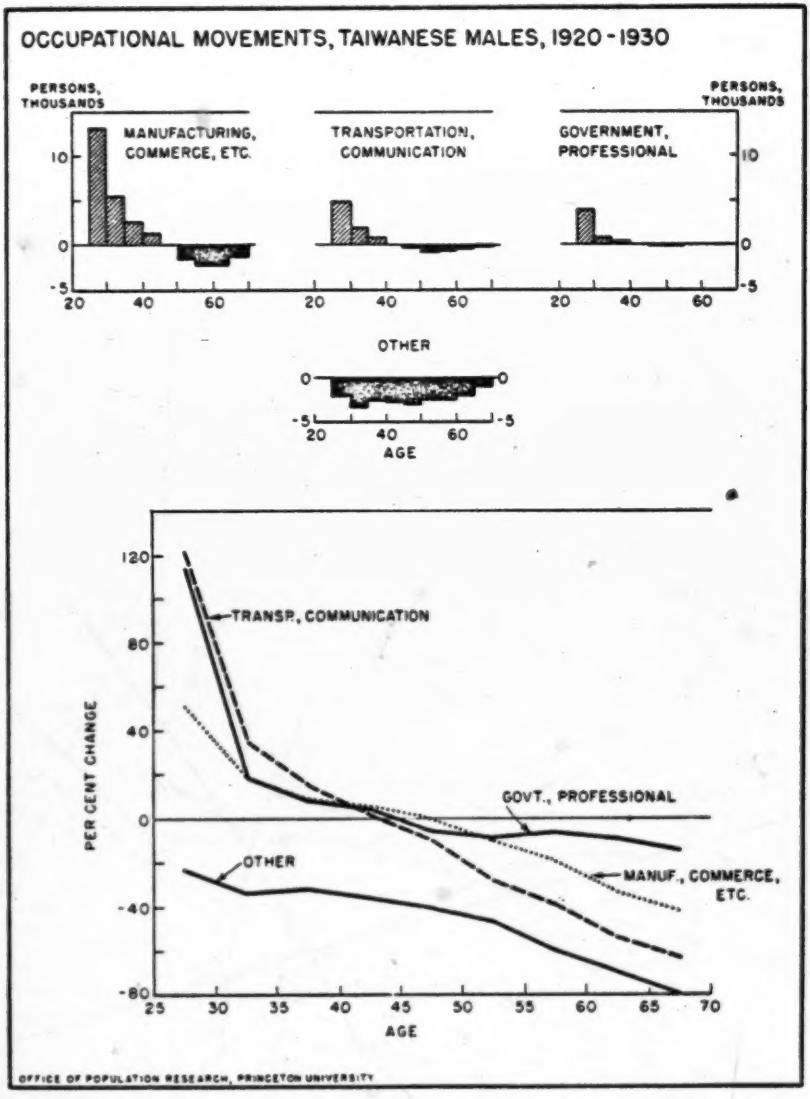

Fig. 14. Occupational Movement of Taiwanese Males, 1920-1930. Net "Gain" or "Loss" in the Occupations Outside of Agriculture.

cellaneous activities. More reasonably, it implies that most of these workers were shifted to more specific occupations merely by refinements of classification in 1930. Accordingly, these reclassified per-

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463 sons must have "entered" the remaining occupations. The data for "other occupations" are by themselves useless. Here they serve as an additional reminder that the estimates of occupational movement in this section are inexact, and deserve to be treated with caution.[25]

Using only the figures for males who held occupations, it has not been worth while to carry out these procedures with those who fell below age 25 in 1930 (age 15 in 1920). It is formally possible to estimate the survivors after a decade to employed boys aged 10-14 in 1920, probably to a fine degree of accuracy. But so few had acquired occupations by that age, outside of agriculture, that the results would have been meaningless as a basis for deducing any kinds of movements.

Yet this neglected age span—between age 10 and age 24—is highly significant. It is here that most males initially entered the labor force. At some point between these limits most Taiwanese undertook their first regular adult employment, exercising whatever choice was available to them. The nature of a person's work for many years in the future tended to be fixed by this initial occupation. This stage in the occupational careers of most males has a special import in an agrarian society. Most of the attitudes and skills pertinent to livelihood are imparted during childhood in the household—occupations, in effect, tend to be inherited. Knowing the sorts of households where boys spend their childhood, it should be a test of whether they were adopted in accordance with tradition if we are able to predict their subsequent occupations.

Taiwan's population statistics are not without resources pertinent to this question. In the census of 1920, following the practice of previous years, the census authorities did more than classify by their type of work just the persons who claimed an occupation. Each census schedule included a space for everyone not reporting an occupation to be entered as "dependent" or "without occupation." The "dependents" made up practically all of this residual group. They were taken to be those who performed minor household work,

[25] One can almost rule out the possibility that errors from this source have spuriously created the patterns derived from the data. In the first place, the men who have been reclassified from "other occupations" were not concentrated in any special age range, but rather spread more or less evenly over the whole span of working ages. Secondly, it is most likely that these persons were re-allocated to the *non-agricultural* sector of the labor force, and not within farming itself. They could in that case not affect the most important comparison of all—the differences between agriculture and the rest of the economy.

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excluding ordinary domestic servants. Tables were published assigning all persons in this group to the occupation on which they depended—in most cases, that of the household head.

One such table, with this material cross-tabulated with age, can be used to supplement the data for men with full-fledged occupations. Here the "dependent" category amounts to a table of almost all the population outside those actually reporting occupations, classified by the type of work that they performed in the household. Virtually all of them (99.6 per cent) were members of the family of the household head. In other words, for young boys this table represents a division roughly along the lines of economic activity that supported their families.

All except a small fraction of Taiwanese males attained some occupation sooner or later during adulthood. Most of those who were recorded as dependents at the pre-adult ages of 10-14 and 15-19 would soon pass into some regular occupational group, and so were not far from such a transition at the time they were enumerated. This peculiarity makes it possible to treat the data as an approximate distribution of pre-labor force males according to the source of livelihood of their families. From this information we can count virtually all the males in these ages who would ever enter an occupation in the sense we ascribe to the term here, classified by the type of pre-occupational work they performed.

The same operations that were applied earlier in this section can be repeated with the male population thus tabulated (occupied and dependents combined), arranged by age. The results are plotted in Fig. 15 for the decade 1920-1930. No comparable tables of dependents were published after 1920. Hence, the survivors to occupied males plus dependent males of 1920, in each age interval beginning this time with 10-14, have been compared simply with men who had an occupation in 1930.

Fig. 15 supplements the findings of Figs. 13 and 14 by incorporating the group of males that reached ages 20-24 in 1930. It adds nothing new to the results at older ages. In fact, a small number of "dependents" are found among males even in adult age groups—a few men always remained in this status. In the "working ages," their proportion to all males was very slight—as low as two per cent. The survivors to workers and dependents taken together, therefore, were slightly more than the workers found in 1930. Fig. 15 is subject to

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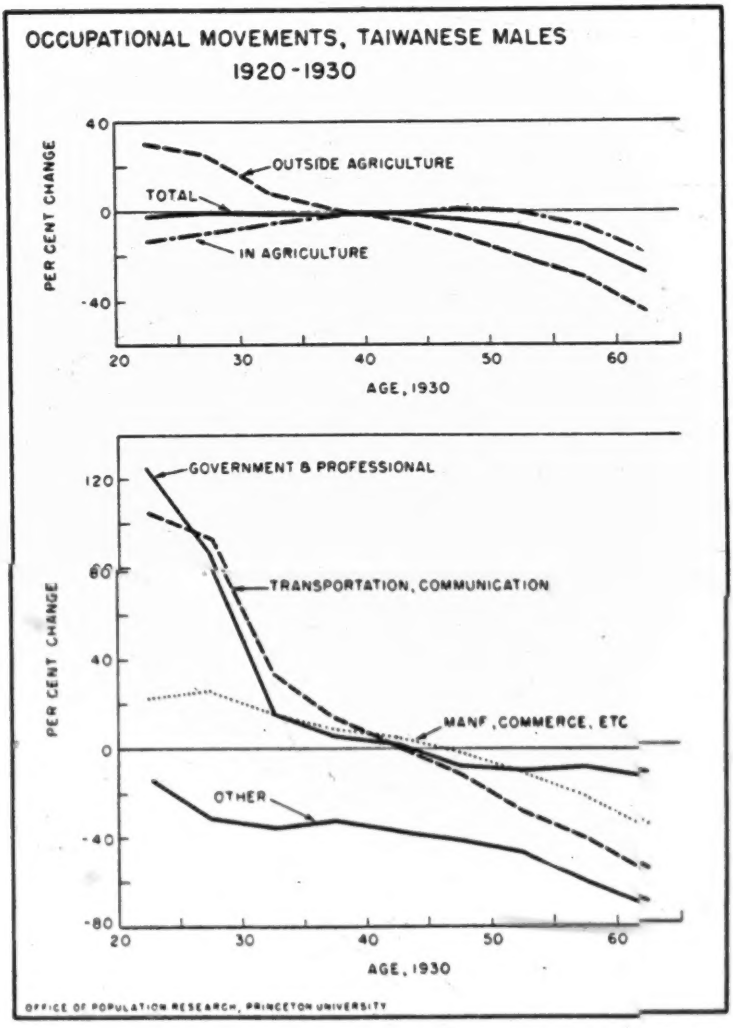

Fig. 15. Occupational Movement and "Inheritance" of Occupations by Taiwanese, 1920-1930. Net Movement between Occupations, and Movement into Occupations by Pre-Labor Force Males.

a small amount of exaggeration in the "loss" at all adult ages from this source.

For the total male labor force, the ratios of gain and loss over the decade 1920-1930 to survivors from 1920—by age in 1930—are connected in Fig. 15 by one continuous line. These ratios take into

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account the survivors of prospective as well as actual members of the labor force, starting with age 10 in 1920. This provision depicts a total occupational system that was self-sufficient with respect to the supply of young entrants during the decade 1920-1930. In the present set of data, next to no one was recruited into employment from outside. Therefore, deviations from this self-sufficiency in any occupational class implies some shifting—some failure to "inherit" occupations—and should also reveal the direction of the movement.

If the assumptions are correct, farming households apparently supplied a greater proportion of their males in these earlier ages to the rest of the labor force than did agricultural employment at later ages according to Fig. 13. Since boys in young ages were more numerous than men in their twenties, the *numbers* involved were much larger. Industry and commerce (also including fishing and mining) must have absorbed most of the young males who left agricultural households for other work. But they seem to have supplied an even greater number of their young workers over this period from their own families.

As in Fig. 13, the fields of transport and communications, and professional occupations and public administration, stand out as borrowers of youth from other families. Extending this test to younger ages only accentuates their debtor position in gaining manpower. This gain is evidence that these fields were expanding, but expanding by a very distinctive mode of recruitment. As before, "other occupations" indicate merely that the classification was inconsistent through time. But since the effect of this shortcoming is less among the ages specially discussed here, it need be of less concern than before.

Census data in this form have thus given a comprehensive picture of the principal flows of persons moving from one occupation to another in this decade. Even though the permanent result of the movement (in terms of changing the age-specific occupational structure of the population) was very small, these materials show that changes of occupation were actually more numerous and followed well-defined patterns. In particular, agriculture had a double role. It was the outstanding source of supply of young men in other occupations; and it was a pursuit to which many men returned when they were no longer youthful. From this we may draw the inference that some diversification of livelihood can be absorbed by an agrarian society with a minimum of lasting effect: rural agriculture "lends" workers

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463 to the rest of the economy in their young adulthood, and takes them back after their years of greatest contribution are past.

Manpower and Age Composition of the Population

464 Unfortunately for the conclusions of this chapter and the previous one, no population data on employment of any consequence have been published for Taiwan since the census of 1930. All that exist for the very interesting period leading up to World War II are the economic statistics reviewed in Chapter II (of quality far inferior to census figures), undisciplined travel accounts of a few foreigners, and the quasi-official reports of the Japanese themselves—half secretive and half boastful.

For this reason there is special value in observing the size of the population of working ages, from which the labor force is drawn, and its development as a component of the total population of Taiwanese. Requiring only detailed information by age and sex, this important measure can be derived from more recent census materials which were not published with elaborate occupational tables. It can be carried up to 1940 with exact figures, and extended beyond this date by the use of special assumptions.

All of the foregoing tables in this chapter have been arranged so as to represent occupational behavior of Taiwanese within certain age strata. This was a device for excluding temporarily two closely related aspects of labor force study: the age structure of the population at any one time, and trends in the size of different age strata. Insofar as these factors help to fix the supply of labor and the amount of dependency in a society, they exert a profound and subtle influence on economic activities.

At a given moment, among male Taiwanese some form of occupation was almost universal in most of the span between ages 15 and 60. Narrowing attention to the men between ages 15 and 64, as the "population of working ages"—to follow a common convention—will obviously include all ages of extensive employment. Not many boys younger than age 15 held occupations, and few people survived at all after age 65 (not all of these remaining occupied). Therefore, the group of men aged 15-64 also contained practically all working males.

Viewed as representing their region in the world, the Taiwanese are not one of the "major" populations of Asia. Consequently, we are free to analyze their composition without introducing the idea

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hsiung and Chiayi had not a single ward with as high as 90 per cent of its population Japanese. For Taiwanese, on the other hand, Taipei consisted neither more nor less of mixed wards than the other cities. In all, at least nine-tenths of the Taiwanese population of every city stayed in districts in which less than a majority of the inhabitants were Japanese.

The Taiwanese in Cities

Of all Taiwanese, so few went to cities that one is prompted to ask whether there were not some special factors present restricting the size of this migration. The effects of such a selective process over many years should produce differences in the characteristics of persons living in cities and of those living outside.

Since few if any newcomers had an opportunity to take up agriculture in the cities, a prominent feature of cityward migration was a movement to new work. To the extent that it was, one would expect that the migrants were the types of persons who usually undertook new occupations in Taiwan—for example, men rather than women, primarily in the ages of young adulthood. If the migrant population had been limited to these categories, cities with large proportions of migrants in their populations must have had disproportionate numbers of young men as compared with the rest of the island. Such a tendency has characterized rapid urbanization elsewhere.

In addition, cities frequently offer opportunities for employment that are considered superior to those found in the countryside. This is especially true of many agrarian societies, where rural poverty sometimes reaches extremes that make the meanest of urban jobs seem attractive. Where such conditions exist, movement to cities very often serves to drain off large numbers of men in young working ages who have lost or overcome their attachment to farming.

In 1935, these effects of age and sex selection were hardly perceptible in Taiwan's urban population taken as a whole. The age composition of all their males combined was nearly the same as the rural population (Table 29). Surprisingly, urban females likewise had almost the same age structure as those outside of cities. Hence, there could have been no sweeping dislocation of persons of different age and sex groups as a result of urbanization in Taiwan.

There are special circumstances in which it is not hard to imagine some movement of single individuals in an agrarian society; this has

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TABLE 31

INTER-CITY DIFFERENCES IN OCCUPATIONAL COMPOSITION

Per Cent of Occupied Males in Selected Types of Occupation in Each of Seven Municipalities, 1930
All Nationality Groups

Cities	*Manufacturing*	*Commerce*	*Transportation*	*Government*	*Agriculture*	*Other Occupations*
Taipei	26	30	10	18	6	10
Chilung	16	21	23	9	4	27
Hsinchu	21	25	10	13	20	11
Taichung	23	28	10	19	14	6
Tainan	28	28	13	18	5	8
Chiayi	22	29	10	12	20	7
Kaohsiung	24	19	20	11	13	13
Total Seven Cities	24	27	13	15	9	12

Source: *Census of 1930, Statistical Tables*, Table 40.

divisions from rural conditions. Nevertheless, large blocs of Taiwan's urban population still supported themselves by farming. Only three Municipalities in 1930 had as few as one-twentieth of their working males engaged in agriculture. It is small wonder that these cities had failed to show symptoms of advanced urbanism in other respects.

Other types of employment in these cities also had certain special features. Government administration in Taipei, transshipping of seaport cargoes in Chilung and Kaohsiung, and sugar processing in Taichung and Tainan were reflected as important activities in their share of all male employment. These figures, pertaining to 1930, reveal nothing of the intensified industrial activity in these cities in the succeeding decade. They are the only available indication in demographic terms of the peculiarities of individual cities. In any event, we are less interested in these peculiar elements than in the relations between types of employment and urban settlement among Taiwanese. Since Table 31 does not show Taiwanese separately, it is affected by differences in the proportions of Japanese and in their work among the various cities. Hence the information, while illuminating, is less useful than one might wish.

More information is available for the population of all seven cities combined. By means of some estimation, we can find the occupational

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TABLE 32

OCCUPATIONAL COMPOSITION IN CITIES OF TAIWAN BY ETHNIC GROUP, 1930*

Distribution of Occupied Males by Occupation and Nationality

	Taiwanese	*Japanese*	*Other Nationalities*
A. Per Cents by Occupation			
Agriculture	13.1	0.9	0.2
Fishing	2.1	2.2	0.5
Mining	2.1	0.2	1.1
Manufacturing	22.8	18.6	43.8
Commerce	29.1	19.6	27.8
Transportation	13.7	10.2	19.1
Govt. & Prof.	6.4	44.4	3.3
Other	10.7	3.9	4.2
Total Occupied	100.0	100.0	100.0
Per Cent Occupied of All Males	54.4	58.0	76.8
B. Per Cents by Ethnic Group			
Agriculture	97.5	2.4	0.1
Fishing	70.8	27.2	2.0
Mining	89.9	3.8	6.3
Manufacturing	65.0	19.0	16.0
Commerce	73.2	17.8	9.0
Transportation	69.1	18.5	12.4
Govt. & Prof.	28.2	70.0	1.8
Other	84.7	11.1	4.2
Total Occupied	67.4	24.0	8.6

* Includes the seven cities of Municipal rank in 1930.
Source: Estimated from *Census of 1930, Statistical Tables*, Table 39.

composition of each ethnic group separately (Table 32).[21] Taking account only of males with occupation, these data represent the urban Taiwanese at less of a disadvantage next to the Japanese than was true over the entire island. Of course, one must remember that Taiwanese (and Mainland Chinese) in the same type of work with Jap-

[21] The necessity to "estimate" arises because the occupational data *by ethnic groups* were given in "Occupation" units (i.e., persons with a principal occupation plus persons with a secondary occupation), and counted some persons twice. In the tables shown here, the ethnic composition of "Occupations" has been applied to the total of persons (males) in each occupation.

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anese usually had subordinate positions. Nevertheless, it seems conclusive that by moving into cities Taiwanese were able to narrow the gap that separated their forms of livelihood from those of the Japanese.

The ethnic composition of occupied persons (appended to Table 32) indicates how the differences in occupational structure among these ethnic groups were weighted in the urban population. Taiwanese, of course, predominated in all lines except in government service and professional activities. Keeping these coveted positions in their own hands was one of the ways in which Japanese were able to live side by side with the rest of the population and avoid the pressure of competition.

Chinese nationals ("Other Nationalities" in Table 32) in these cities also appeared in a few types of work far more than in the working population as a whole. Their specialties were of an opposite kind: many worked as laborers in small manufacturing enterprises and as longshoremen, accounting for their large share of all "Manufacturing" and "Transportation" workers.

TABLE 33

OCCUPATIONAL DISTRIBUTION OF TAIWANESE MALES REPORTING AN OCCUPATION, INSIDE AND OUTSIDE MAJOR CITIES, 1905, 1920, 1930

	1905		1920		1930	
	*Inside**	*Outside*	*Inside†*	*Outside*	*Inside‡*	*Outside*
Agriculture	2.3	72.1	13.2	71.9	13.1	74.0
Fishing	.6	2.9	1.2	2.3	2.1	2.0
Mining	28.4	5.4	1.1	1.4	2.1	1.3
Manufacturing			27.1	6.9	22.8	5.9
Commerce	37.7	6.4	28.9	6.4	29.1	8.2
Transportation	10.4	1.9	11.2	2.8	13.7	2.8
Govt. & Prof.	5.6	1.7	6.7	1.9	6.4	2.3
Other	15.0	9.6	10.6	6.4	10.7	3.5
Total Occup.	100.0	100.0	100.0	100.0	100.0	100.0

* Comprises the cities of Taipei, Taichung, and Tainan. The boundaries for Taipei in this tabulation were smaller than the city as subsequently organized.

† Cities of Taipei, Taichung, and Tainan, with the same boundaries used at later census dates.

‡ Cities of Taipei, Chilung, Taichung, Tainan, Chiayi, Kaohsiung.

Sources: *Census of 1905, Detailed Tables, Prefectural Volume*, Table 17.
Census of 1920, Prefectural Volume, Table 16.
Census of 1930, Statistical Tables, Table 39.

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MIGRATION AND THE GROWTH OF CITIES

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Finally, the role of migration in social change can be clear only if we can make comparisons at different points of time. Occupational profiles of city and non-city working males are available in not quite the same form for three separate dates. The census reports of 1905 and 1920 each included a table of occupied persons in three cities (Taipei, Taichung and Tainan). Placed next to the corresponding figures in 1930 (Table 33), these early data are reasonably similar in all three years.

Not all of the same cities are included, and so the occupational distributions for cities alone do not stand close comparison with each other. One's attention is therefore drawn to the structure of occupations *outside* the cities involved. In Table 33, it appears that by removing the small group of urban working persons from the total population of Taiwanese, one in effect also removes most of the diversification in employment over time, and consequently a large share of the social changes that occurred in Taiwan. In other words, the new activities that resulted from Japanese occupation remained sealed up in the few urban centers. The Taiwanese population outside of these cities remained essentially as agrarian as at the beginning of Japanese rule.[22]

Even if as centers of innovation we did not consider Taiwan's cities important, a study of migration would have made them so. Permanent migration was rare among Taiwanese; but of those who migrated, a large proportion went to a few cities. Even though these cities were not growing fast enough to enlarge their share of all Taiwanese very substantially, they did the greatest part in redistributing the population.

The real significance of these shifts of residence arose from the fact that they were also shifts in activities. For the most part withdrawal from agriculture meant exit from rural communities. People departed every year to large towns or cities that had some provision for more diverse kinds of livelihood. It was primarily in these centers that the Japanese fostered modern enterprises and developed a need for labor. Migration was one of the forms of the response to

[22] Obviously, since more cities are represented in the 1930 figures, the figures themselves are biased and there is some chance of bias in the conclusion that we have drawn. By taking occupied men of all ethnic groups, the same comparison can be made based on the *same three cities* at all dates. This is possible because the table for all ethnic groups was published for each city separately (cf. Table 31, above). The result is the same, in that the data indicate no change in occupational structure outside even these three cities.

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these new opportunities for employment. It steadily brought more Taiwanese into contact with the modern side of the Japanese economic program.

Yet even though movement to the cities did widen the horizons of a few Taiwanese, it was surrounded by circumstances that tended to minimize this effect. The familial character of the migration made the break between country and city less sharp than it might have been. Removal to a city did not expose migrants very readily to whatever new influences were there. These were all dominated by Japanese, who kept most of their innovations to themselves and erected barriers against free intercourse with the rest of the population.

Urban growth therefore did not promote general social change among the Taiwanese. It removed into cities those who were to feel the strongest effects of contact with these alien elements. Migration thus helped to absorb the modern aspects of economic development so that they did not intrude into the affairs of rural communities.

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592 554 government policy could have been felt in this sphere, and so it must have been a pattern of long standing among the Taiwanese. Though there is no way of knowing how much the variation amounted to between individual families, between various sources of livelihood it was of a very restricted nature. One of the principal features of the Chinese social order, however, is that there has been very little variation in the general notions that people in different stations hold about what forms of conduct are *desirable*—the standards of behavior within one's family, or with members of related families, have been remarkably similar from group to group, whether or not these ideals are completely fulfilled in fact. It has also been characteristic of this system through many historic periods that it has not given rise to rigid status and class distinctions that became hereditary and remained fixed over time. The commonest sources of prestige have been associated with symbols that leave some room for personal achievements, and not simply privileged birth, in their attainment—the adoption of genteel as apart from vulgar pursuits, a highly esteemed and arduous classical education, and observance of traditional forms of ritual that are inappropriate to commonplace affairs. Wealth, in almost any form of livelihood, has conferred a capacity (e.g., through leisure) to practice these ideals, in many ways that poverty denied to the greatest part of the society.

592 463 554 Status distinctions of this sort are lines that cut across most if not all of the occupational divisions recognized in Japanese census practice, though they obviously were present in some more than others (commerce or government service, for example, more than agriculture or fishing). There are further resources, however, to use in finding out the extent of variation within occupations. In the one master table published with the census of 1920, households were also classified by three additional categories of "occupational status"—"Owners" or "Independent Workers," "Officials," and "Laborers."[10] Each household, if the head was occupied, was assigned to one of these groups as well as to a regular occupation, so as to specify more fully the nature of the head's position. The classification is limited in value, for it is not certain that the terms signify anything that is

[10] The English terms are only approximations of the meaning in Japanese. The sense of "Independents" (*Yeh-chu* in the Chinese reading of the term) really is closer to the notion of "master" of an enterprise, somewhat like the term "self-employed" in Western census practice. "Officials" (*Yi-yüan* in Chinese, where it means a lowly and subordinate position) has an honorific connotation in Japanese. "Laborer" (read *Lao-wu* in Chinese) is relatively unambiguous, though it is not clear what line divides it from the others.

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consistent from one occupation to another. In agriculture, a person apparently was "independent" if he actually operated a farm (without distinction between landlords and others), and "laborer" if simply working for another. Agricultural occupations had hardly any positions that could be designated as "officials"; practically all of these were found as government officials or professionals of s[illegible] kind. These terms are so vague that it is useless to be distressed ov[illegible] what they do not reveal. The service they *do* perform is to separate, within each broad occupational class, the more from the less successful families ("independent" as opposed to "laborers," based on the fortunes of the household head), and to distinguish a few of the cases that do not easily fall in either of these (the "officials," wherever they occurred).

The households of "laborers," in each of the main classes of occupations, were on the average smaller than those in the same occupations that were more prosperous, and smaller even than those of "officials" (see Table 55). The more prosperous ("independent") households were consistently larger than either of the others, whether they were composed solely of family members or included outsiders.[17] Mixed households of "independent" heads were the largest of all, and had smaller proportions of outsiders than mixed households of the two other "status" groups. In other words, the wealthier mixed households exceeded the lesser ones in the same manner that had marked the difference between mixed households and those composed of family relatives only—chiefly through the extension of their families rather than the incorporation of outsiders. Not merely in the families of farmers, but within any occupational category, the households of the well-to-do were larger than those of the poorer portions of the population, and in this same pattern.

Households whose heads were "independently" employed had the smallest proportions of their male family members engaged in full-time work. But while leisure, as measured by this standard, was especially common in "independent" households whether outsiders were present or not, it was greater in mixed households of this group

[17] Here, as before, persons living alone ("single-person households") have been excluded, and Table 55 represents co-resident households only. Therefore the actual number of persons per household is less important (e.g., for comparison with later dates in Taiwan or with other data), than the pattern of variation from group to group in Table 55. It happens in this case that most of the single-person households were of the "laborer" group, and so would make the contrast between the two more pronounced if included, by giving the "laborers" a still smaller figure for average household size.

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TABLE 55

AVERAGE SIZE OF HOUSEHOLD AND EXTENT OF MALE EMPLOYMENT IN FAMILIES CLASSIFIED BY "OCCUPATIONAL STATUS," 1920

By Occupation of Head and Type of Household

	Number of Households	*House-holds of All Types*	*Purely Family House-holds*	*Mixed House-holds*
A. Average Persons per House-hold, both Sexes, by Occupation of Head.				
All Occupations				
a. Independents*	388,635	6.4	6.2	8.7
b. Laborers	128,768	4.4	4.4	5.4
c. Officials	1,462	4.9	4.6	5.8
Agriculture				
a. Independents	309,158	6.6	6.4	9.5
b. Laborers	41,314	4.2	4.2	5.5
Outside Agriculture				
a. Independents	79,477	5.7	5.5	7.1
b. Laborers	87,454	4.5	4.5	5.3
B. Per Cent of Male Family Members Who Reported an Occupation				
All Occupations				
a. Independents		62.0	62.3	57.9
b. Laborers		65.1	65.0	69.2
c. Officials		54.0	52.5	60.9
Agriculture				
a. Independents		62.6	63.0	58.1
b. Laborers		67.6	67.6	65.2
Outside Agriculture				
a. Independents		58.8	59.0	57.3
b. Laborers		64.0	63.7	70.0

* For an explanation of the meaning of these terms, see text.
Source: From *Census of 1920, Detailed Tables*, Table 36.

than anywhere else (see Table 55, Section B). Apparently these more prosperous households also took in outsiders for different purposes. Though not shown in Table 55, the non-relatives in "laborers' " households were chiefly "lodgers" (whatever might be included under this term); the ones in "independent" households were mostly

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listed as employees, who allowed family members to be released from regular work.

Changes Between 1920 and 1930

The decade between 1920 and 1930 produced little change in household or family structure as far as size or other observable features were concerned (see Table 46, above). Families on the average became slightly larger than before, but chiefly by additions to their dependent children and possibly older relatives. When the data for 1920 are put back into terms appropriate for comparison with 1930 (that is, by replacing the single-person households in the computation of averages), it appears that the growth of households was distributed almost uniformly in different portions of the population—it is necessary merely to add the figure of about 4/10 to the average size of households in each major occupational group in 1920 to approximate the size found in that group in 1930. The tables showing household composition were much abridged in 1930, and permit only restricted comparison. In many of the features already used to describe their structure in 1920, however, households in 1930 were practically the same. They were made up almost entirely of family relatives; and presumably the contrasts between mixed and purely family households were unaltered. The same uniformity in sex composition prevailed among the various classes of occupations, with the same exception in the case of households with non-occupied heads. Since these data contribute nothing to the discussion, they have not been reproduced here.

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There is more to be gained by comparing economic activities of family members. The burden of dependency was on the average slightly increased between 1920 and 1930, as we have seen (Table 46, above). By 1930, households representing all the main sources of support (i.e., occupations of heads) had smaller proportions of male family members occupied than 10 years before.[18]

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Agricultural households seemed to share less in this rise of family dependency than others (see Table 56). In part the divergence may be because peasant agriculture is better able to provide a secure livelihood for many who could not find steady employment elsewhere—especially young boys and older men. We have found, in

[18] How the added burden was shared between households of only family and mixed households cannot be ascertained, though the similarity of other patterns leads one to presume that this one remained nearly the same as in 1920. This was one of the items of detail omitted in publication of the 1930 census.